AD-A037 369 NAVY ELECTRONICS LAB SAN DIEGO CALIF F/G 17/2
ASW SHIP COMMAND AND CONTROL SYSTEM: FREEPLAY/ASW EXERCISE TEST--ETC(U)
APR 67 J K CLIFFORD
UNCLASSIFIED NEL-TM-1091 NL

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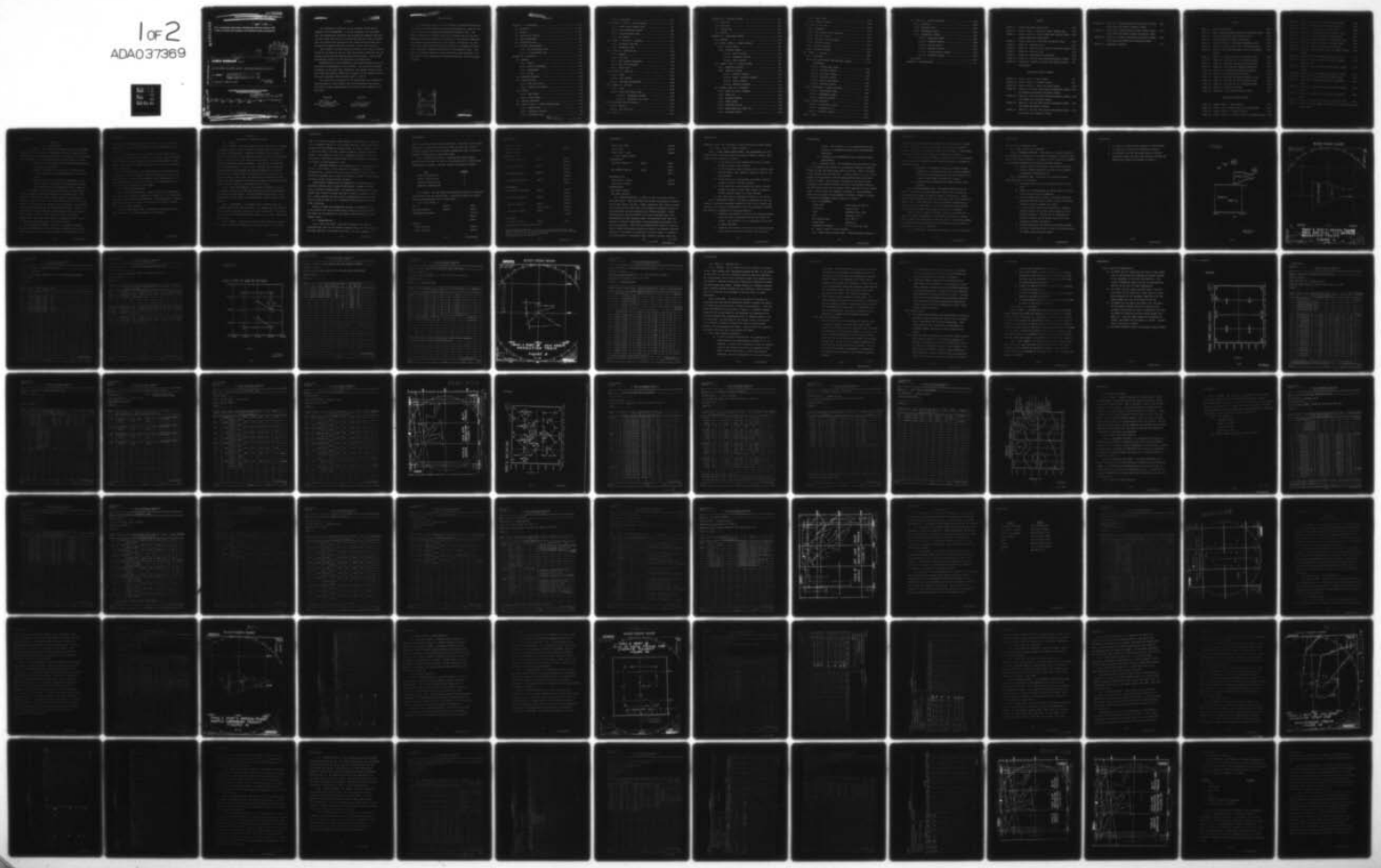

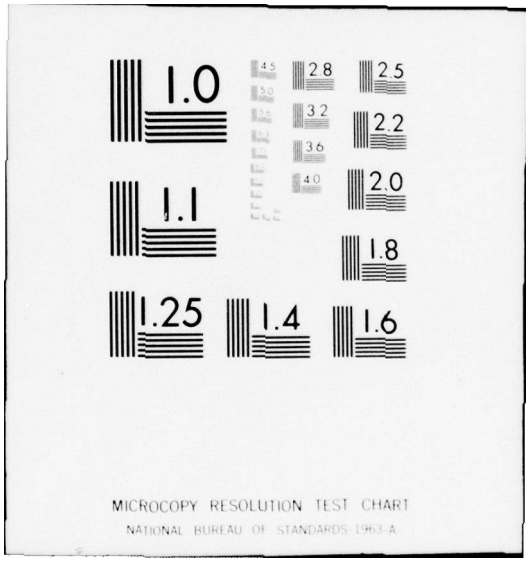
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U. S. NAVY ELECTRONICS LABORATORY, SAN DIEGO, CALIFORNIA

MOST Project -1

This is a working paper giving tentative information about some work in progress at NEL.
If cited in the literature the information is to be identified as tentative and unpublished.

NEL/Technical Memorandum 1091

TECHNICAL MEMORANDUM NEL-TM-1091

124 p.

ASW SHIP COMMAND AND CONTROL SYSTEM: FREEPLAY/ASW EXERCISE TEST PLAN (U)

20 April 1967

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S-3103 (10570)
NEL J70972

NEL/Technical Memorandum 1091

FOREWORD

The information contained in this document SHOULD NOT BE RELEASED TO THE CONTRACTOR. It is not necessary, nor advisable that the organization preparing the operational programs know what will be tested, how it will be tested and what will not be tested. This will assure that portions of the system have not been reinforced/given special attention in order to meet test criteria.

This document has been prepared primarily for internal distribution to aid those at the U.S. Navy Electronics Laboratory who are working on the ASW Ship Command and Control System. Only limited distribution outside of the laboratory is contemplated.

Distribution of this document by the Project Office may be interpreted as endorsement of its contents. The work was performed by members of NEL Code 3320, Operations and Systems Analysis Division under NEL Problem J70972 and in support of NEL Problem J70973 Test and Evaluation (PERT Activity 02220 - 02947).

This test plan is tailored to the operational and functional specifications as they existed when this memorandum was written. Revisions of these specifications may require some changes in the test plan.

Approved

R. K. Harriott

LCDR R. K. Harriott USN
Project Officer

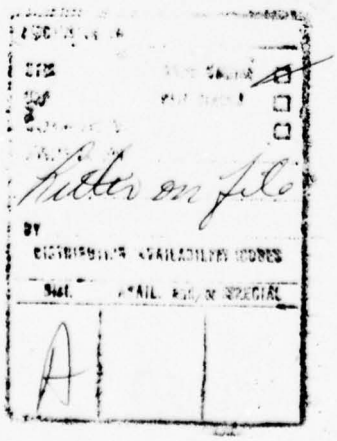
Approved

J. Paul Ward

Mr. J. Paul Ward
Project Engineer

SPECIAL NOTICE

The Prohibited Section of this Technical Memorandum should not be shown to officers and men who will be operating as a part of the "Ship's Crew" in the ASWSC&CS Freeplay/ASW Exercise Test. The Section contains the details which are available only to the test personnel and others involved in setting up the tactical situations and controlling the forces not being tested. Obviously, the crew of the ship being tested should not be able to anticipate the tactics, maneuvers, threats or decisions of the opposing force. However, all persons should be aware and familiar with Sections I Introduction, II The Freeplay/ASW Exercise Narrative, and III Weapons Delivery.



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PROHIBITED SECTION TABLES

SECTION I

INTRODUCTION

1.1 OBJECTIVE. The Freeplay/ASW Exercise Test Plan has been developed for the purpose of exercising the total operational computer program in representative tactical situations. More precisely, the objectives of the Freeplay/ASW Exercise Test are as follows:

a) Confirm that the Operational Programs function during a typical ASW Exercise.

b) Provide situations to permit users to form professional judgments as to acceptability of program features.

c) Provide potential situations for Executive Timing Test. (There is no intent to extract other quantitative data during the execution of this exercise.)

1.2 GENERAL. The Test Plan is based upon an actual operational readiness evaluation conducted in the recent past. This action is deliberate in order to give validity and substance to the test. Names of ships, etc., have been changed to minimize the chances of identifying the exercise and its results. The narrative is generally comprehensive and logically consistent. However, in the detailed tactical segments, some liberties have been taken in the placement of ships in the interest of ASDEC efficiency. Further, this test plan lends itself to skipping periods of time in order to minimize dead-time and maximize action.

1.3 QUALITATIVE TESTING. There is a variety of status, action and information signals which are exchanged between equipments and ships for the ASWSC&CS control and coordination tasks.

No attempt to individually test these signals is made, it being assummed that this has been accomplished during previously conducted tests.

1.4 TEST ENVIRONMENT. The normal input and output modes in the ASWSC&CS equipment will be used. Air, surface, and sub-surface units; ordnance, sonar, radar and fire control equipment is simulated. The simulation computer will be the source of the external signals generated.

1.5 OPERATIONAL SHIP. The Operational Ship is indicated in the tables. In some situations, either the CVS or DEs can be the Operational Ship and this is indicated in the table headings. In other situations only the CVS or DE can be the Operational Ship and this is also indicated in the tables.

1.6 OPERATOR REQUIREMENTS. -

1.6.1 CVS OPERATIONAL SHIP. When the CVS is the Operational Ship, personnel required to operate the system are a Test Director, Simulation Deputy, Facilities Engineer, 4 TG&C Operators, 7 ASWSC&CS Operators, Helmstand Operator, CIC Officer, Watch Table Recorder and 2 Status Board Recorders.

1.6.2 DE OPERATIONAL SHIP. Personnel requirements are the same except only 5 ASWSC&CS Operators are required.

SECTION II

FREEPLAY/ASW EXERCISE NARRATIVE

2.1 GENERAL. -

2.1.1 PHASES. The Freeplay/ASW Exercise Test Plan is divided into three phases. Phase I consists of three parts which may be conducted simultaneously. Each part requires up to 12 hours to execute if performed in its entirety in real time and without skips. Part I of Phase I is an ASW Ship Barrier exercise. Part II is a Patrol Aircraft ASW Barrier exercise. Part III is a Surface and Air Intercept exercise. Phase II is a combined Cold War/Hot War exercise which would require four days to conduct in real time. Phase III is a Weapons Delivery exercise which would require one day to execute in real time. By dropping out selected time segments, the above execute times have been reduced to realistic intervals of testing which can be completed in 40 hours.

2.1.2 TERMS OF REFERENCE. For exercise purposes, the term BLUE forces refers to the ASW Task Group and any units designated as friendly to BLUE forces. The term PURPLE forces refers to the submarines, surface units, and surveillance aircraft opposing BLUE forces.

2.1.3 MANEUVERING. All bearings are in degrees true and relative bearings have not been used. All courses are true courses and relative or magnetic courses or turns are not used. Ranges are in nautical miles (NM) except sonar ranges are in yards. All speeds are in knots.

2.1.4 TRACKS. Navigation tracks for BLUE forces are listed in tables and figures throughout the exercise plan. BLUE tracks

must be followed to permit PURPLE forces to force contact. However, once a possible contact is held by BLUE force(s), BLUE units should deviate from the planned navigation track, as would be done at sea, in order to evade, hold down, attack or thwart aggressive PURPLE action. When contact is lost for a reasonable length of time (15-30 minutes), BLUE units should change course and speed to intercept and resume planned navigation track.

2.2 SUBMARINE WEAPONS. Each submarine has the capability of firing 8 MK-16 MOD 7, and 8 MK-28 MOD 3 torpedoes. The MK 16 torpedoes have a speed of 46.2 knots and a range of 14,000 yards. The MK 28 torpedoes have a speed of 20 knots, a range of 4,000 yards, and have passive acoustic-homing guidance.

Additionally, STOPPER has the capability of firing six air-breathing missiles with a speed of 800 knots, a range of 12-300 miles, altitude 1000-2000 feet. The missiles are designed for use against land targets or ships and may be fired in salvoes of one or two. Target bearing and range must be determined prior to firing. This is normally done by two submarines taking bearings on electronic emissions.

Missile firings from submarines require the submarine to be on the surface for three minutes before firing the initial salvo, and remain on the surface for two minutes before firing each subsequent salvo.

2.3 COMMUNICATIONS. -

2.3.1 DATA LINK SHIPS. BLUE units equipped with digital communications link are the ASWC&CS equipped ships USS WASP (CVS-18), USS VOGE (DE-1047), USS KOELSCH (DE-1049), the NTDS equipped USS

JOHNSON (DLG-4) and VP-96 P3 ANEW aircraft. The CICs of these units communicate automatically with each other via Link 11. Link 14 equipment aboard these units converts appropriate Link 11 data and transmits information to other BLUE ships.

2.3.2 NON-DATA LINK SHIPS. Non-C&CS BLUE ships receive digital data from C&CS via Link 14, and communicate by conventional communication networks. Specific network assignments include:

NET	CHANNEL
Barrier Reporting Net	2
Surface Reporting Net	3
Aircraft Reporting Net	4
Submarine Reporting Net	5

2.4 FORCES. The ASW forces participating (actual or simulated) in this test plan are listed below. (Fictitious names and numbers have been deliberately used in many cases):

2.4.1 BLUE FORCE. -

UNIT	SONAR	RADAR
USS WASP (CVS-18)*	SQS-23A	SPS-10
(COMASWBLUE embarked)		SPS-37A
		SPS-30
		SPN-6
CVSG-99+		
VS-91 (12 S2E)+		APS-88
VS-92 (12 S2E)+		APS-88

HS-91 (16 SH3A)+	AQS-10	
VAW-91 (4 E1B)+		APS-20
VA-91 (4 A4)+		
COMDESRON - 99+		
USS VOGE (DE-1047)*	SQS-26	SPS-10
		SPS-40
USS SMITH (DD-2)+	SQS-23	SPS-10
		SPS-40
USS JONES (DD-3)+	SQS-29	SPS-10
		SPS-40
USS JOHNSON (DLG-4)+	SQS-23	SPS-10
		SPS-48
COMCORTRON-9+		
USS KOELSCH (DE-1049)*	SQS-26	SPS-10
		SPS-40
USS TOM (DE-(1007)+	SQS-26	SPS-10
		SPS-40
USS DICK (DD-13)+	SQS-23	SPS-10
	SQA-10 (VDS)	SPS-40
USS HARRY (DD-14)+	SQS-23	SPS-10
		SPS-40
COMSUBDIV-9		
USS PLUG (SSN-1)+	BQQ-2	SS-2
COMFAIRWING-99 (COMFAIRWING BLUE)+		

*Some liberties have been taken in the placement of ships in the various incidents to assure that ASWSC&CS is involved in the various episodes included in the total operations.
+Fictitious names and numbers.

VP-96 (9-P3 ANEW)		APS-80
VP-92 (9-P3)		APS-80
VAH-91 Det C (3-A3)		APS-80

2.4.2 PURPLE FORCE. -

COMSUBDIV-10+		
USS CORK (SSBN-11)+	BQQ-2	BPS-9
		WLR-1
USS STOPPER (SS-12)+	BQQ-2	BPS-9
		WLR-1
COMFAIRWING 10+		
VAH-10 Det A (4-A3)+		APS-80
VP-11 Det A (4-P3)+		APS-80
COMTRAWLDIV-9+		
USS SWIFT (TL-11)+		
USS SPEED (PT-12)+		

2.5 GENERAL SITUATION. A state of cold war exists between BLUE and PURPLE. BLUE and PURPLE have become increasingly distrustful of each other's actions. PURPLE submarines with missile launching capability have been noted with increasing frequency on out of area operations at long distances from PURPLE homeland. PURPLE submarines and fishing trawlers have been conducting open ocean surveillance of BLUE shipping lanes, and observing BLUE fleet exercises to collect intelligence on ship/equipment performance and modes of operation. BLUE JCS has directed that action be taken to thwart PURPLE intelligence collection efforts, to provide increased measures of protection to shipping in selected areas, to increase ASW surveillance of suspected PURPLE submarine transit lanes and

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operating areas, and to conduct training simulating PURPLE forces.

2.6 PHASE I PART I - NARROW PASSAGE. -

2.6.1 PURPLE NARROW PASSAGE AREA. The approaches to a suspected PURPLE submarine patrol zone funnel through a narrow, deep water passage bounded as follows:

a) On the east by a line running from Point A 21-14N, 158-10W to Point B 21N, 158-10W

b) On the south by a line starting at 21N, 158-10W, running to Point C 21N, 158-22W, thence to Point D, 20-33N, 159-35W.

c) On the west by a line starting at 20-33N, 159-35W, running to Point E 21-26N, 159-35W.

d) On the north by a line starting at 21-26N, 159-35W running to Point F 21-26N 159W, thence to Point G 21-14N, 158-27W thence to 21-14N, 158-10W

e) The above area is depicted in Figure 1. and Table 1.

2.6.2 COMASWBLUE MISSION. To obtain information on the frequency of attempted submerged transits of this area by PURPLE submarines, and to obtain information on mode of operations, CINCBLUE has assigned COMASWBLUE the following missions:

a) Establish and maintain a one ship ASW barrier between 21-20N 158-50W, and 20-48N 158-50W from 130900 to 141100. This barrier is to be patrolled by one VDS-equipped destroyer.

b) Establish and maintain a two ship ASW barrier between 20-36N 159-20W and 21-26N 159-20W from 131000 to

141200. This barrier is to be patrolled by two destroyers, an ASWSC&CS destroyer and a non-ASWSC&CS destroyer.

c) Coordinate with COMFAIRWING BLUE to prevent mutual interference.

2.6.3 COMASWBLUE PLAN. The COMASWBLUE Plan for Phase I, Part I is to establish and maintain a one destroyer barrier at 158-50W between 21-20N and 20-48N from 130900 to 141100. DICK is assigned to this barrier and will use VDS. A second barrier is to be established and maintained at 159-20W between 20-36N and 21-26N from 131000 to 141200. This barrier is divided at 21N with KOELSCH assigned to the northern section and TOM to the southern section. The ASW Barrier ships are to remain within five miles of the barrier lines. Phase I Part I is depicted in Figure 2. The navigation track for this phase of the exercise is listed in Table 2, subject to change by COMASWBLUE (OTC)in event of a contact.

2.6.4 ENVIRONMENT.-

Cloud Cover	SCTD Clouds at 2500 ft.
Visibility	Unrestricted
Wind	Easterly 10-20 knots
Seas	Easterly 3-5 ft.
Sea Surface Temp.	76° - 80° F.
Layer Depth	260-320 ft.
Thermocline Gradient	2° - 5° F/100 ft (neg)

2.7 PHASE I PART II- BROAD PASSAGE. -

2.7.1 PURPLE BROAD PASSAGE AREA. PURPLE submarine enroute to

and from nearby patrol zones are known to be transiting in an east to west direction a broad area passage of deep water bounded by Point A 20-30N 159W, to Point B 18-30N 159W, to Point C 18-30N 161W, to Point D 20-30N 161W, to Point A as depicted in Figure 3.

2.7.2 COMFAIRWINGBLUE MISSION. Because of other high priority tasks assigned to COMASWBLUE, the following mission is assigned to COMFAIRWING BLUE:

a) Establish and maintain a one-plane VP-ANEW barrier oriented on a north-south axis, in an area bounded by 18-30N and 20-30N between 159W and 161W (Points A, B, C and D) from 130900 to 141200 per Figure 3.

b) Coordinate with COMASWBLUE to prevent mutual interference.

2.7.3 COMFAIRWINGBLUE PLAN. The COMFAIRWINGBLUE plan for Part II consists of an eight-sonobuoy barrier with a spacing of approximately 35 miles as shown in Figure 3 and Table 3. Eight hour SSQ-48 sonobuoys are used for the barrier and SSQ-28 buoys for CODAR. One VP ANEW aircraft is to be on station continuously as shown in Figure 3 and Table 4. The VP aircraft can only receive the sonobuoy emissions when within six miles of a sonobuoy.

Aircraft are to attempt to detect, classify, localize and track all PURPLE submarines in their area and maintain a surface plot. COMASWBLUE aboard WASP is OTC for the VP area for the purpose of demonstrating the capability of the ASWSC&COS to be an aid to command in this type of operation.

2.7.4 ENVIRONMENT. Environment conditions in the barrier are

the same as in paragraph 2.6.4.

2.8 PHASE I PART III - TRAINING. -

2.8.1 COMASWBLUE TRAINING. Anticipating a serious trend toward hostilities CINCBLUE has directed an increase in overall readiness of ASW forces assigned. In support of this directive, CINCBLUE has assigned COMASWBLUE the following training mission:

a) Conduct aircraft intercepts against BLUE aircraft.

b) Conduct surface intercepts against own helicopters simulating PT/TRAWLER targets.

2.8.2 COMASWBLUE PLAN. To fulfill the training mission COMASWBLUE plan is as follows:

a) The threat axis for air and surface units is to be 045T.

b) VOGE will be stationed on the threat axis at a range of 90 miles to act as a WATCHDOG.

c) Two A4 Aircraft will be kept in Aircraft Readiness Condition ONE from dawn to dusk and will be launched whenever "bogeys" endanger the force.

d) An E1B aircraft will be kept airborne to transmit BELLHOP picture to the CVS, and to report air and surface contacts. The E1B will be stationed at a range of 30 miles on the threat axis and at best altitude to detect low flyers.

e) Surface ships will keep their gun batteries manned and shall bring their guns to bear and lock-on skunks and bogeys approaching the force.

f) The plan to simulate enemy aircraft and PT/TRAWLERS is contained in Section IV Prohibited Section.

g) The formation for the ASW Group shall be FORM 40. Navigation track, and ships and aircraft assigned are depicted in Figure 5 and listed in Table 5.

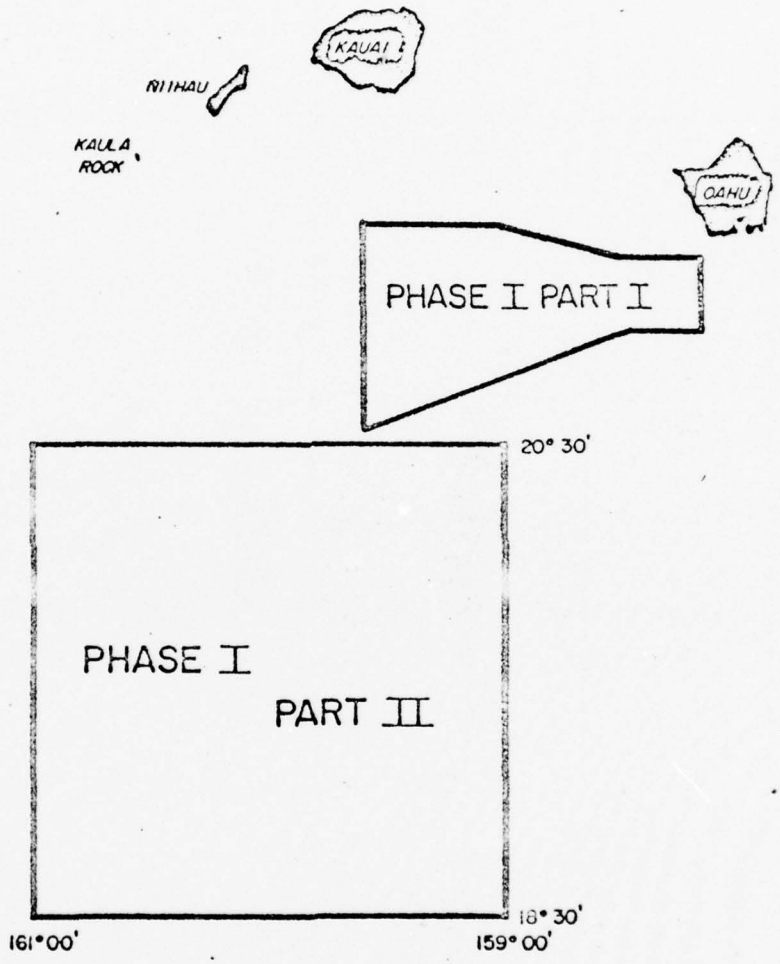
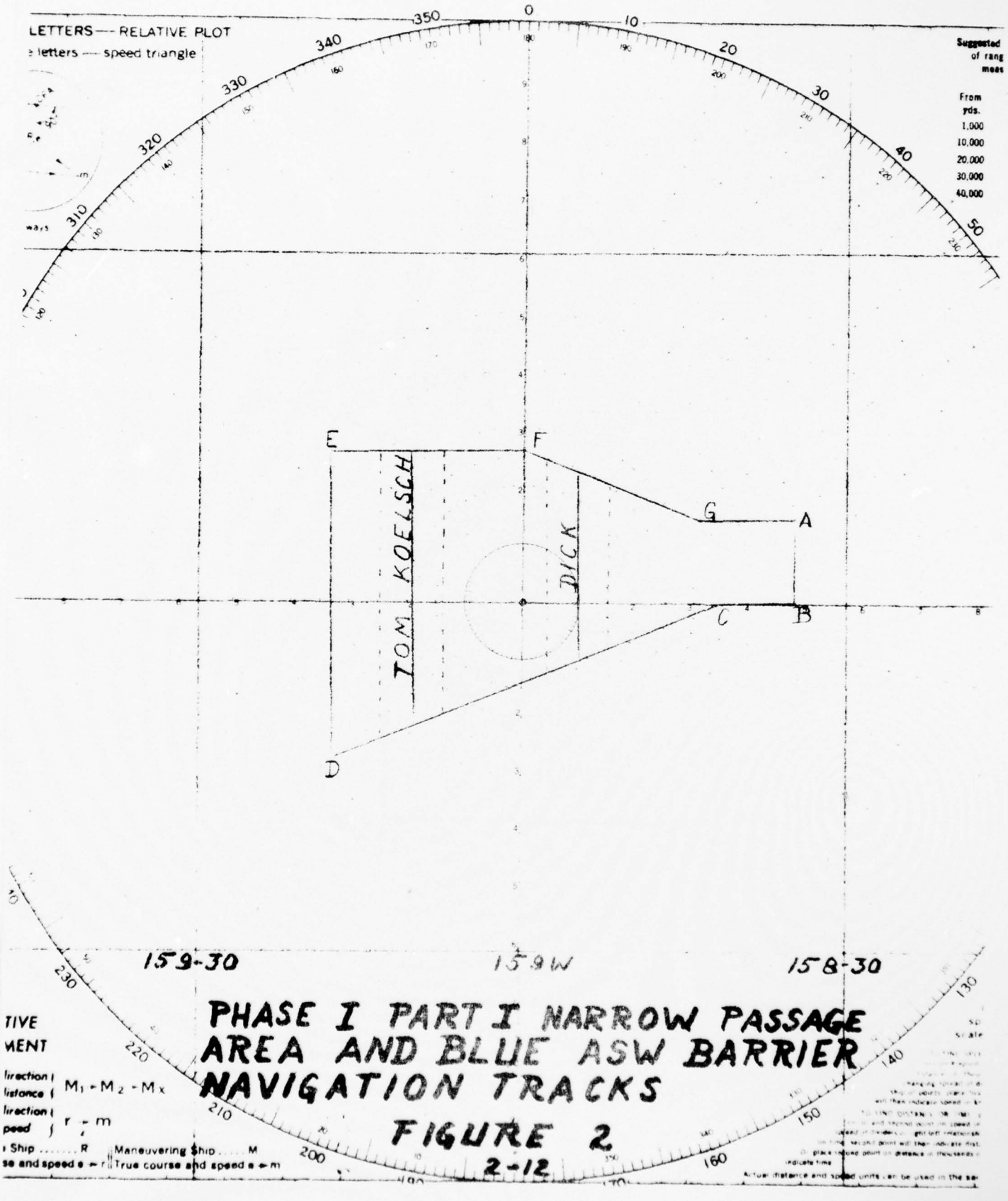

KAUAI
NIIHAU
KAULA ROCK
OAHU
PHASE I PART I
20° 30'
PHASE I
PART II
18° 30'
161° 00'
159° 00'

FIG. 1

MANEUVERING BOARD



PHASE I PART I NARROW PASSAGE AREA AND BLUE ASW BARRIER NAVIGATION TRACKS

FIGURE 2

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U. S. NAVY ELECTRONICS LABORATORY
SAN DIEGO 52, CALIFORNIA

TITLE

PHASE I PART I NARROW PASSAGE AREA

DATE

130900 - 141200

Ref. PT. 21N 159W (BRNG 067° 154 NM FROM DLRP 20N 161-30W)

DE OpShip

TABLE 1

POINT	LAT (N)	LONG (W)	BRNG FM REF	DIST
A	21-14	158-10	076°	58
B	21-00	158-10	090°	57
C	21-00	158-22	090°	34
D	20-33	159-35	231°	43
E	21-26	159-35	307°	43
F	21-26	159-00	000°	26
G	21-14	158-27	065°	33

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DATA SHEET
11ND-NEL-5220/1 (REV. 9-64)

U. S. NAVY ELECTRONICS LABORATORY
SAN DIEGO, CALIFORNIA 92152

TITLE

PHASE I PART I DD/DE ASW BARRIER NAVIGATION TRACK

DATE

130900 - 141200

Ref Pt. 21N 159W (Brng 067° 154NM from DLRP 20N 161-30W)

CVS/DE Op Ship

Table 2

UNIT	TIME	Brng Fm Ref Pt	Rnge Fm Ref Pt	COURSE	SPEED	DIST	MINUTES	REMARKS	
DICK	130900	120°	11	000°	12	24	120	Repeat	every
DICK	1100	027°	20	180°	12	24	120	Four	Hours
DICK	1300	120°	ETC.....						
KOELSCH	130900	285°	21	000°	15	15	60	Repeat	every
KOELSCH	1000	317°	28	180°	15	15	60	Two	Hours
KOELSCH	1100	285°	etc.						
TOM	130900	230°	25	000°	15	15	60	Repeat	every
TOM	1000	260°	20	180°	15	15	60	Two	Hours
TOM	1100	230°	ETC.....						

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PHASE I PART II - BLUE VP AIR PLAN

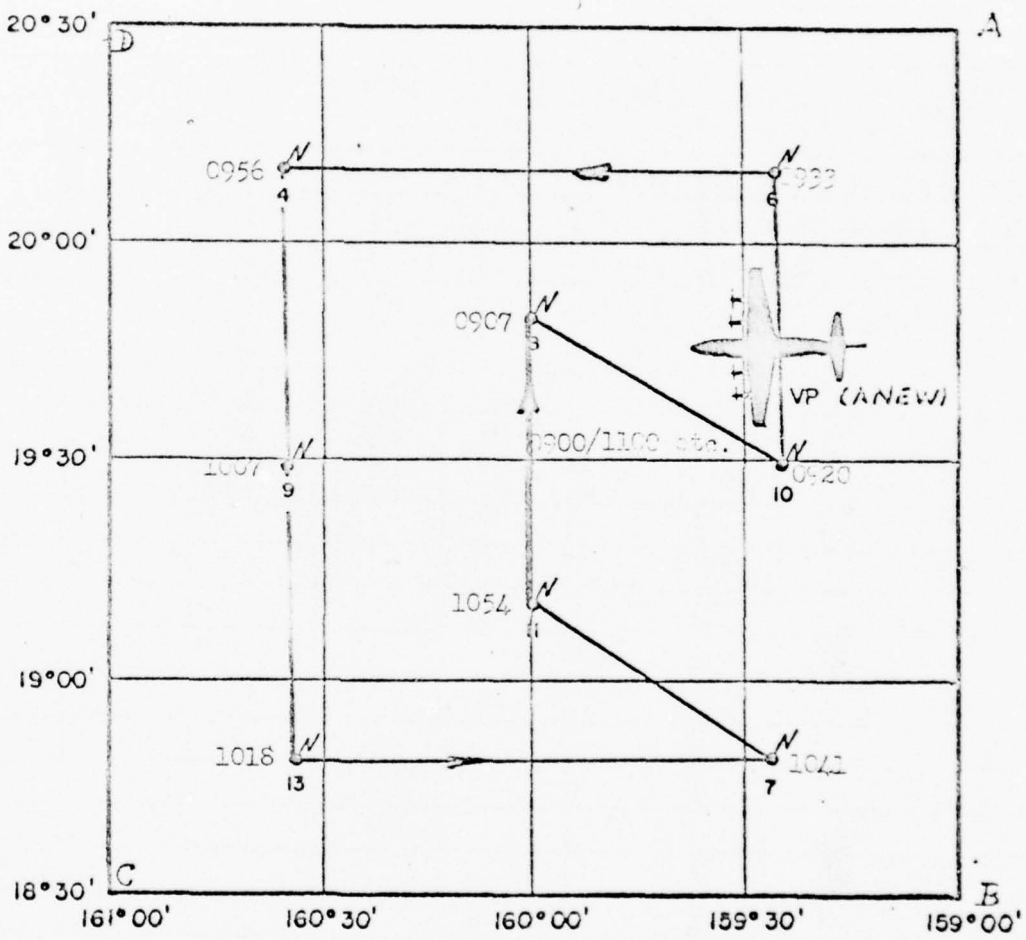

FIGURE 3

DATA SHEET
11ND-NEL-5220/1 (REV. 9-64)

U. S. NAVY ELECTRONICS LABORATORY
SAN DIEGO, CALIFORNIA 92152

TITLE

PHASE I PART II BROAD PASSAGE AREA AND SONOBUOY PATTERN

DATE

130900 - 141200

REF. PT. 19-30N 160W (BRNG 110° 90 NM FROM DLRP 20N 161-30W)

CVS/DE OpShip

TABLE 3

POINT	LAT (N)	LONG (W)	BRNG FM REF PT	RNGE FM REF PT	BUOY #	BRNG (T)	RNGE FM REF PT		
A	20-30	159-00	043°	82	4	320°	53		
B	18-30	159-00	317°	82	6	040°	53		
C	18-30	161-00	223°	82	7	140°	53		
D	20-30	161-00	137°	82	13	220°	53		
					8	000°	20		
					9	270°	34		
					10	090°	20		
					11	180°	34		

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DATA SHEET
11ND-NEL-5220/1 (REV. 9-64)

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TITLE
PHASE I PART II VP ANEW AIRCRAFT SONOBUOY MONITORING

DATE
130900 - 141200

Ref Pt. 19-30N 160W (Brng 110° 90NM from DLRP 20N 161-30W)

ALTITUDE 1500'

Table 4 CVS-DE Op Ship

DEPART	BUOY #	COURSE (T)	SPD KNOTS	DIST NM	MIN	ARRIVE	BUOY #	REMARKS	
130900	Ref Pt	000°	180	20	7	0907	8		
0907	8	120°	180	40	13	0920	10		
0920	10	000°	180	40	13	0933	6		
0933	6	270°	180	68	23	0956	4		
0956	4	180°	180	34	11	1007	9		
1007	9	180°	180	34	11	1018	13		
1018	13	090°	180	68	23	1041	7		
1041	7	300°	180	40	13	1054	11		
1052	11	000°	200	20	6	1100	Ref Pt		
1100	Ref Pt	000°	ETC. .	. . .	. . . .			Repeat	*
1300	Ref A	ETC. .	. . . .					Repeat	*

* 0900 Track will be repeated every two hours unless otherwise directed by COMASWBLUE or COMFAIRWING BLUE

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Observers

Sheet of Sheets

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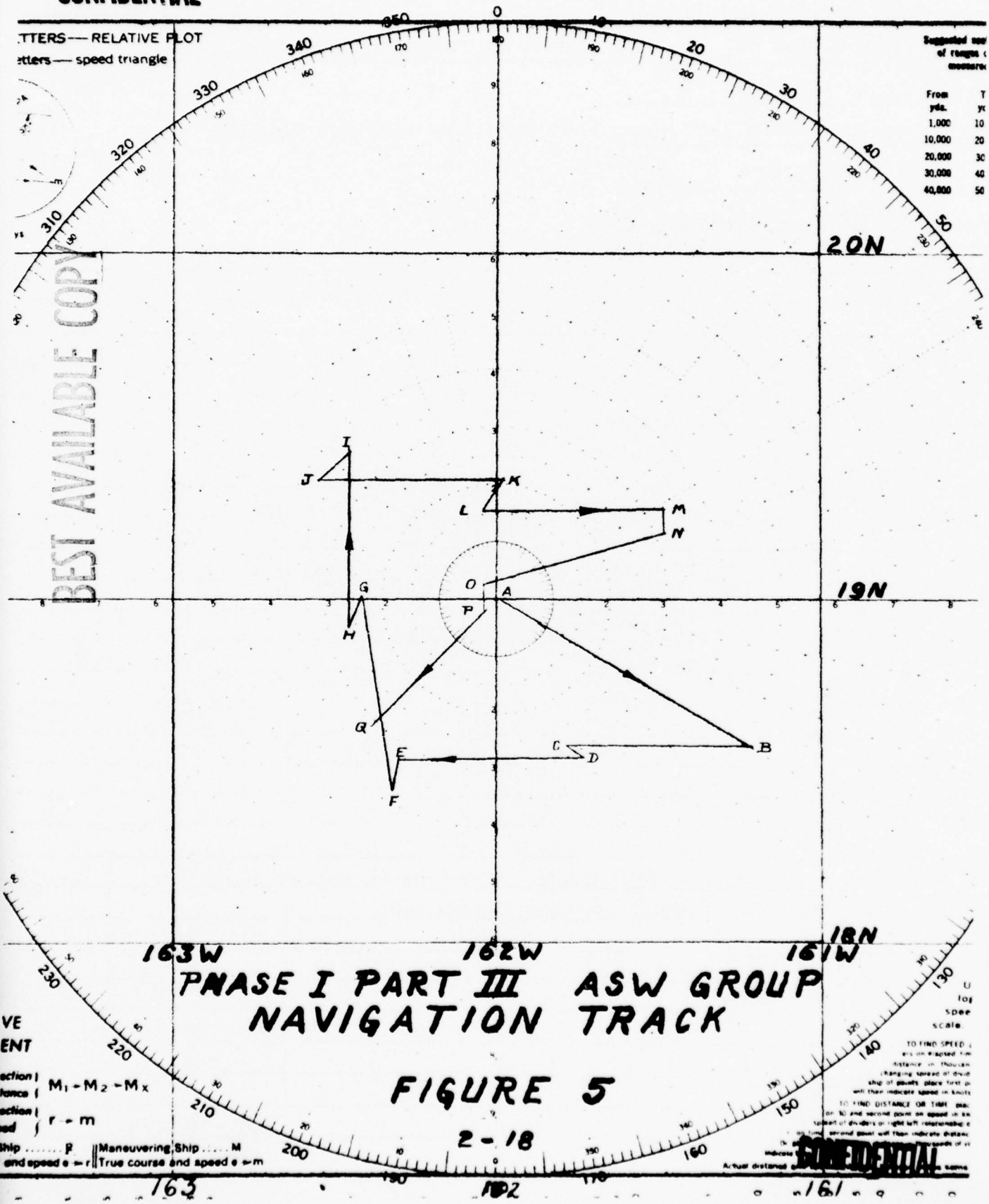
MANEUVERING BOARD



PHASE I PART III ASW GROUP NAVIGATION TRACK

FIGURE 5

2-18

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SAN DIEGO, CALIFORNIA 92152

TITLE

PHASE I PART III ASW GROUP NAVIGATION TRACK

DATE

130900 - 141200

REF PT. 19N 162W (Brng 205° 67 NM FROM DLRP 20N 161-30W)

FORMATION AXIS 000°T. THREAT AXIS 030°T.

TABLE 5 CVS/DE Op Ship

POINT	TIME	UNIT	STA (°T)	BRNG FM REF PT	RNGE FM REF PT	CUS	SPD	DIST	REMARKS
	130900	WASP	0	000°	00				GUIDE
		JONES	3000						
		JOHNSON	3270						
		SMITH	3090						
		HARRY	3180						
		VOGE	*						WATCHDOG
		E1B	**						BELLHOP
A	130900	WASP	0	000°	00	120	16	52	
B	1215	WASP	0	120	52	270	12	33	
C	1500	WASP	0	155	28	120	16	4	
D	1515	WASP	0	150	32	270	12	33	
E	1800	WASP	0	212	33	190	20	5	
F	1810	WASP	0	209	38	350	12	34	
G	2100	WASP	0	272	24	200	20	7	
H	2121	WASP	0	258	37	000	12	32	
I	140000	WASP	0	313	37	215	20	7	
J	0021	WASP	0	304	38	090	12	32	
K	0300	WASP	0	003	21	215	20	7	
L	0321	WASP	0	349	16	090	12	32	
M	0600	WASP	0	062	33	180	16	4	
N	0615	WASP	0	069	31	255	12	33	
O	0900	WASP	0	312	3	180	15	5	
P	0920	WASP	0	225	4	225	12	32	
Q	1200	WASP	0	225	32	180	15	--	FINEX

*WATCH DOG STATION 030T-90NM FROM WASP

**BELL HOP STATION 030T-30NM FROM WASP

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2.9 PHASE II - COLD/HOT WAR. -

2.9.1 GENERAL. The AA capability of ASW forces is expected to be a vast problem with considerable effect on ASW. It is worthy of note that in a Hot War situation, WASP has only four marginal day interceptors (4-A4) and no effective night or AA defense without DDs/DLG. Snooper surveillance flights are conducted by PURPLE aircraft during this phase. Advance warning of a pending surveillance aircraft should be passed by voice circuits, Link 11 and/or Link 14 to the rest of the forces by the E1B, SAU, or picket destroyers.

2.9.2 BLUE PLAN. The BLUE Plan for Phase II divides the operating area into letter designated sectors to permit assignment of surface and air units with a minimum of explanation. Areas and letter designations are as shown in Figure 6. Initially surface forces are to be positioned in the northern half endeavoring to eliminate surface ship interference with VP JEZEBEL plants in the southern area. The main body of the surface force is to be centrally located in order to conduct ASW patrol in the eastern sectors, and is designated SAU ALPHA. Another SAU is to operate in the western sectors, and is designated SAU BRAVO.

2.9.3 BLUE SURFACE OPERATIONS. -

a) To meet refueling committments, the disposition of BLUE forces at the commencement of Phase II is not optimum. The main body is located in area XE conducting underway replenishment and is screened by VOGE, HARRY, JOHNSON and SMITH in a four ship circular formation, and four helicopters in an outer circular

formation. JONES and DICK are assigned as SAU ALPHA to patrol to the northeast and KOELSCH and TOM are assigned as SAU BRAVO and are proceeding to area YW. Figure 7 depicts the disposition of BLUE surface forces and the track to be followed. Tables 6 and 6A list the navigation track and screening formation for the ASW Group, Table 7 for SAU ALPHA, Table 8 for SAU BRAVO, and Table 9 for Sonobuoy Locations.

b) EMCON ship to shore circuits are shut down. Air search radars are operating on all ships as protection against snooper aircraft. Sonars are active and IFF/SIF transponders are operating. HF receivers, VHF and UHF transceivers , and Link 11 and Link 14 are operating to convey data and control messages.

2.9.4 BLUE AIR OPERATIONS. -

a) The air plan calls for VS aircraft to monitor buoys as shown in Figure 8 in areas X-RAY and YANKEE. Buoys LIMA and KILO are to be used only when two areas are combined for a large area search. Five S-2Es are to be airborne continuously with one each to search areas XE, XW, YE and YW, and one aircraft as scrapper for the E1B. An E1B is to be airborne continuously to detect low flyers and surface contacts. Four SH-3A's are to be airborne continuously to supplement the screen or act as SAUs as the tactical situation demands.

b) The COMFAIRWINGBLUE Air Plan for Phase II provides for a one-aircraft VP barrier in areas WHISKEY and ZULU to monitor buoys as shown in Figure 8.

c) Eight-hour SSQ-48 sonobuoys are utilized for the LOFAR phase of the barriers. VP aircraft are to detect, classify, localize, and track PURPLE submarines in their assigned area. Attacks are to be conducted upon receipt of formal declaration of war. A surface plot is to be maintained by the Operational Ship and all surface and subsurface contacts and amplifying reports are to be made to COMASWBLUE in WASP, information to the ASW Group.

2.9.5 PURPLE PLAN. -

a) The PURPLE Plan provides for surveillance of transiting merchant vessels and BLUE ASW forces in the operating area. Submarines are to remain undetected. After declaration of war, submarines are authorized to commence torpedo and missile attacks against BLUE forces.

b) Based on known intelligence of merchant shipping lanes, BLUE expects STOPPER, a conventional submarine, to utilize the northern half of the patrol zone assigned as this area encompasses several ocean shipping lanes. BLUE notes that STOPPER may try to take advantage of heavy biologies, shallow water effects, and possible fishing boats to the south of the island of NIIHAU to

conduct noisy evaluations as snorkeling.

c) BLUE expects CORK, a nuclear submarine, to operate generally in the center and northwest sector of the exercise area in an effort to control the ASW Group and track merchant shipping.

d) Details of CORK and STOPPER operations are contained in Prohibited Section IV.

e) Details of hostile surveillance air flights are contained in Prohibited Section IV.

f) The environmental conditions during the Cold War part of Phase II are shown in Figure 9.

2.10 PHASE II - COLD WAR. -

2.10.1 COMEX. At 141600 WASP and her screening ships VOGE, HARRY, JOHNSON and SMITH are refueling in the vicinity of 20-30N 159-30W course 120T speed 12. Refueling is completed at 1700 and the ASW Group proceeds as indicated in Tables 6, 6A, and Figure 7. SAU ALPHA, consisting of DICK and HARRY, is conducting operations in the vicinity of 21-15N 159-15W as indicated in Table 7 and Figure 7. SAU BRAVO, consisting of KOELSCH and TOM, are enroute to the northwest sector of the operating area in the vicinity of 21-10N 161-15W course 290T speed 12 as indicated in Table 8 and Figure 7.

2.10.2 PLUG TRANSIT. At 151709, the friendly submarine USS PLUG enters the area at 21-20N 159-30W course 260T speed 13 and transits on the surface as indicated in Figure 7 and Table 12. An S2E escorts PLUG through the operating area. PLUG completes her transit at 161046.

2.10.3 MAIN BODY MANEUVERING. -

a) At 150715 the OTC orders the Main Body to head northwest as he believes that STOPPER is located slightly to the southeast of the Main Body position. The center northwestern area, Area YE, is considered by the OTC as the area of least probability.

b) At 160300, the OTC orders the Main Body of the ASW Task Group to the north and to stay clear of a submarine contact to the southwest reported by VP, and high probability area to the east in area XE.

c) At 160600 the OTC orders SAU ALPHA, DICK and HARRY, and SAU BRAVO, KOELSCH and TOM, to depart their assigned search areas in time to rendezvous with WASP for UNREP at 161900 PIM 21-17N 162-05W course 125T speed 12. DICK and HARRY depart for rendezvous at 160800, and KOELSH and TOM depart at 161400. Rendezvous is effected at 161900.

d) At 162000 CINCBLUE orders war declared against PURPLE.

PHASE TWO -141600 - 192200
KAUAI
NIIHAU
KAULA ROCK
YW
YE
XW
XE
YANKEE
X-RAY
WW
WE
ZW
ZE
WHISKEY
ZULU
21° 48'
21° 30'
21° 00'
20° 30'
20° 00'
19° 30'
19° 00'
18° 30'
163° 30'
163° 00'
162° 30'
162° 00'
161° 30'
161° 00'
160° 30'
160° 00'
159° 30'

FIGURE 6

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PHASE II COLD WAR ASW GROUP NAVIGATION TRACK

DATE

141600 - 162000

DLRP 20N 161-30W CVS/DE Op Ship

WASP ASW GROUP CENTER, FORMATION AND THREAT AXIS 000°

TABLE 6

POINT	TIME	UNIT	STATION (°T)	BRNG Fm REF PT	RNGE Fm REF PT	CUS	SPD	DIST	REMARKS
	141600	WASP	0						CTR
	141600	VOGE*	3000						
	141600	SMITH*	3270						
	141600	JONES*	3090						
	141600	JOHNSON*	3180						
A	141600	WASP	0	062°	64	120°	12	18	COMEX
B	1730	WASP	0	079°	82	270°	12	12	
C	1830	WASP	0	077°	71	300°	12	30	
D	2100	WASP	0	055°	53	020°	12	22	
E	2250	WASP	0	045°	72	270°	12	38	
F	150200	WASP	0	015°	53	070°	16	13	
G	0249	WASP	0	024°	61	280°	16	23	
H	0415	WASP	0	002°	60	145°	12	36	
I	0715	WASP	0	037°	38	307°	12	39	
J	1030	WASP	0	352°	54	170°	12	36	
K	1330	WASP	0	355°	17	250°	12	9	
L	1415	WASP	0	325°	18	345°	12	36	
M	1715	WASP	0	339°	53	123°	12	68	
N	2245	WASP	0	069°	39	265°	12	68	
O	160300	WASP	0	282°	31	030°	12	12	
P	0400	WASP	0	305°	30	000°	12	48	
Q	0800	WASP	0	339°	69	083°	12	54	

* Unless otherwise indicated or directed by OTC, DDs remain as stationed throughout Phase II Cold War

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PHASE II COLD WAR ASW GROUP NAVIGATION TRACK

DATE
141600 - 162000

TABLE 6 (Cont)

POINT	TIME	UNIT	STATION (°T)	BRNG FM REF PT	RANG FM REF PT	CUS	SPD	DIST	REMARKS
R	1230	WASP	0	022°	77	275°	12	24	
S	1430	WASP	0	005°	73	335°	12	12	
T	1530	WASP	0	001°	85	216	12	12	
U	1630	WASP	0	356°	75	275	12	30	
V	1900	WASP	0	335°	84	125	12	12	RDVU
		VOGE	4000						RDVU
		KOELSCH	4315						RDVU
		DICK	4045						RDVU
		SMITH	4270						RDVU
		JONES	4090						RDVU
		TOM	4225						RDVU
		HARRY	4135						RDVU
		JOHNSON	4180						RDVU
W	2000	WASP	0	340°	75	125	12	0	FINEX

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PHASE II ASW GROUP HELICOPTER SCREEN AND DIPPING CYCLES

DATE
141600-191715

NOTE: SEE TABLE 6 FOR ASW GROUP NAVIGATION TRACK

DLRP 20N 161-30W CVS/DE Op Ship

WASP FORMATION CENTER

TABLE 6A

UNIT	DIP ON DIP OFF	DIP 1 STATION	DIP ON DIP OFF	DIP 2 STATION	DIP ON DIPOFF	DIP 3 STATION	REMARKS
H-#1	141600	6045	1610	6075	1620	6015	REPEAT TRACK EVERY HALF HOUR
	1605		1615		1625		
H-#2	141600	6315	1610	6345	1620	6285	REPEAT TRACK EVERY HALF HOUR
	1605		1615		1625		
H-#3	141600	6135	1610	6165	1620	6105	REPEAT TRACK EVERY HALF HOUR
	1605		1615		1625		
H-#4	141600	6225	1610	6255	1620	6195	REPEAT TRACK EVERY HALF HOUR
	1605		1615		1625		

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TITLE
PHASE II COLD WAR SAU "A" NAVIGATION TRACK

DATE
141600-162000

DLRP 20N 161-30W CVS Op Ship

DICK SAU "A" GUIDE

TABLE 7

POINT	TIME	UNIT	STATION (°T)	BRNG FM REF PT	RNGE FM REF PT	CUS	SPD	DIST	
AA	141600	DICK	0	045°	111	180°	12	144	
		HARRY	12090						
AB	150400	DICK	0	125°	97	090°	12	12	
		HARRY	12090						
AC	0500	DICK	0	121°	107	000°	12	140	
		HARRY	12090						
AD	1640	DICK	0	047°	124	270°	12	84	
		HARRY	12180						
AE	2340	DICK	0	006°	84	000°	12	12	
		HARRY	12180						
AF	160040	DICK	0	005°	96	090°	12	92	
		HARRY	12180						
AG	0800	DICK	0	045°	136	261°	12	134	
		HARRY	12170						
V	1900	WASP	0	335°	84	125	12	12	RDVU
		DICK	4315						
		HARRY	4045						
W	2000	WASP	0	340°	75	125	12	0	FINEX
		DICK	4315						
		HARRY	4045						

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PHASE II COLD WAR SAU "B" NAVIGATION

DATE

141600-162000

DLRP 20N 161-30W CVS/DE Op Ship

KOELSCH SAU "B" GUIDE

TABLE 8

POINT	TIME	UNIT	STATION (°T)	BRNG FM REF PT	RNGE FM REF PT	CUS	SPD	DIST	REMARKS
BA	141600	KOELSCH	0	327°	80	290°	12	36	
		TOM	12200						
BB	1900	KOELSCH	0	315°	111	180°	12	134	
		TOM	12090						
BC	150600	KOELSCH	0	235°	95	270°	12	12	
		TOM	12090						
BD	0700	KOELSCH	0	239°	105	000°	12	138	
		TOM	12090						
BE	1830	KOELSCH	0	313°	123	090°	12	80	
		TOM	12180						
BF	160400	KOELSCH	0	354°	84	000°	12	12	
		TOM	12180						
BG	0500	KOELSCH	0	355°	96	270°	10	90	
		TOM	12180						
BH	400	KOELSCH	0	314°	138	107°	13	90	
		TOM	12180						
V	1900	WASP	0	335°	84	125	12	12	RDVU
		KOELSCH	4315						
		TOM	4225						
W	2000	WASP	0	340°	75	125	12	0	FINEX
		KOELSCH	4315						
		TOM	4225						
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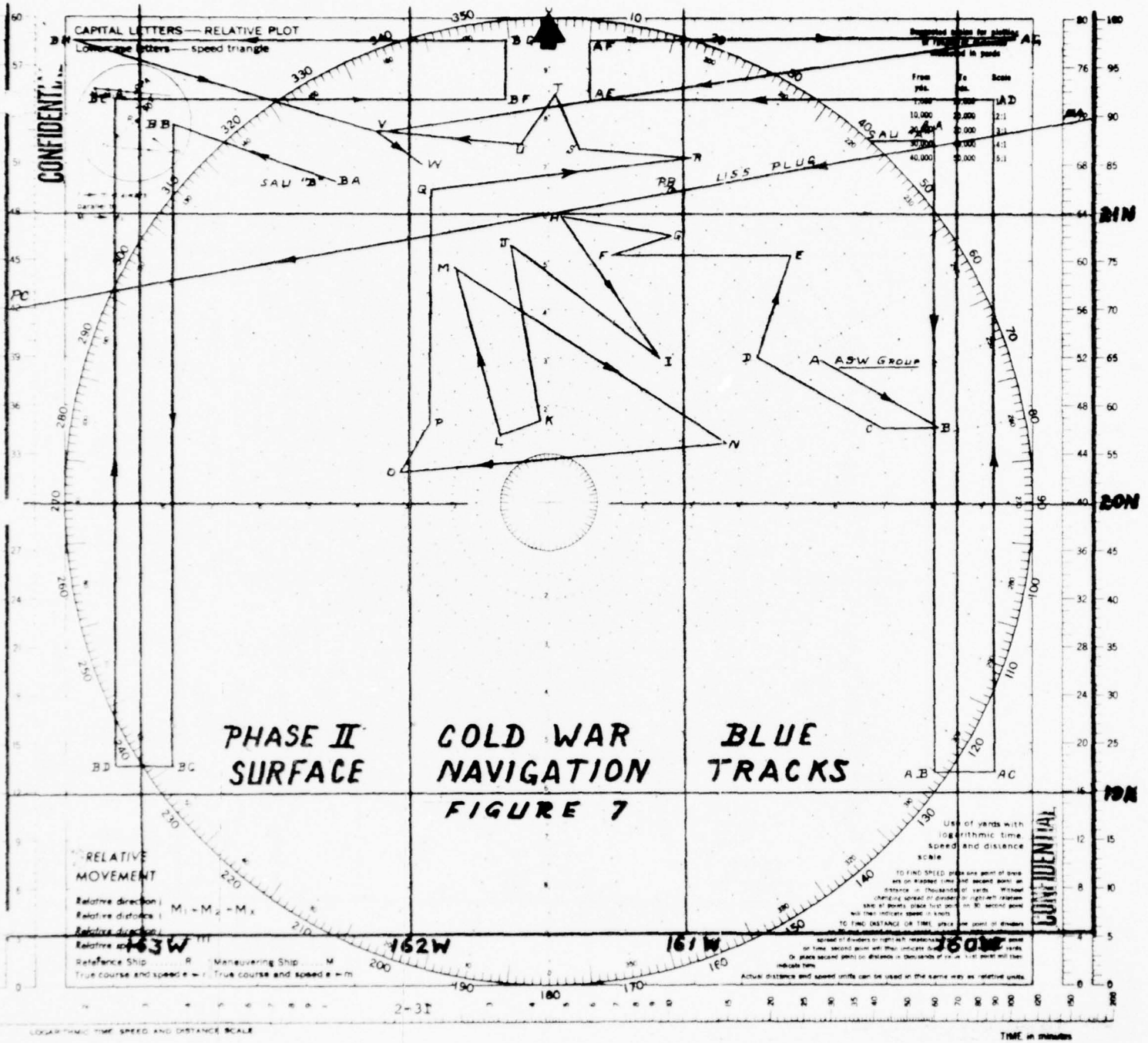

PHASE II BLUE AIR PLAN

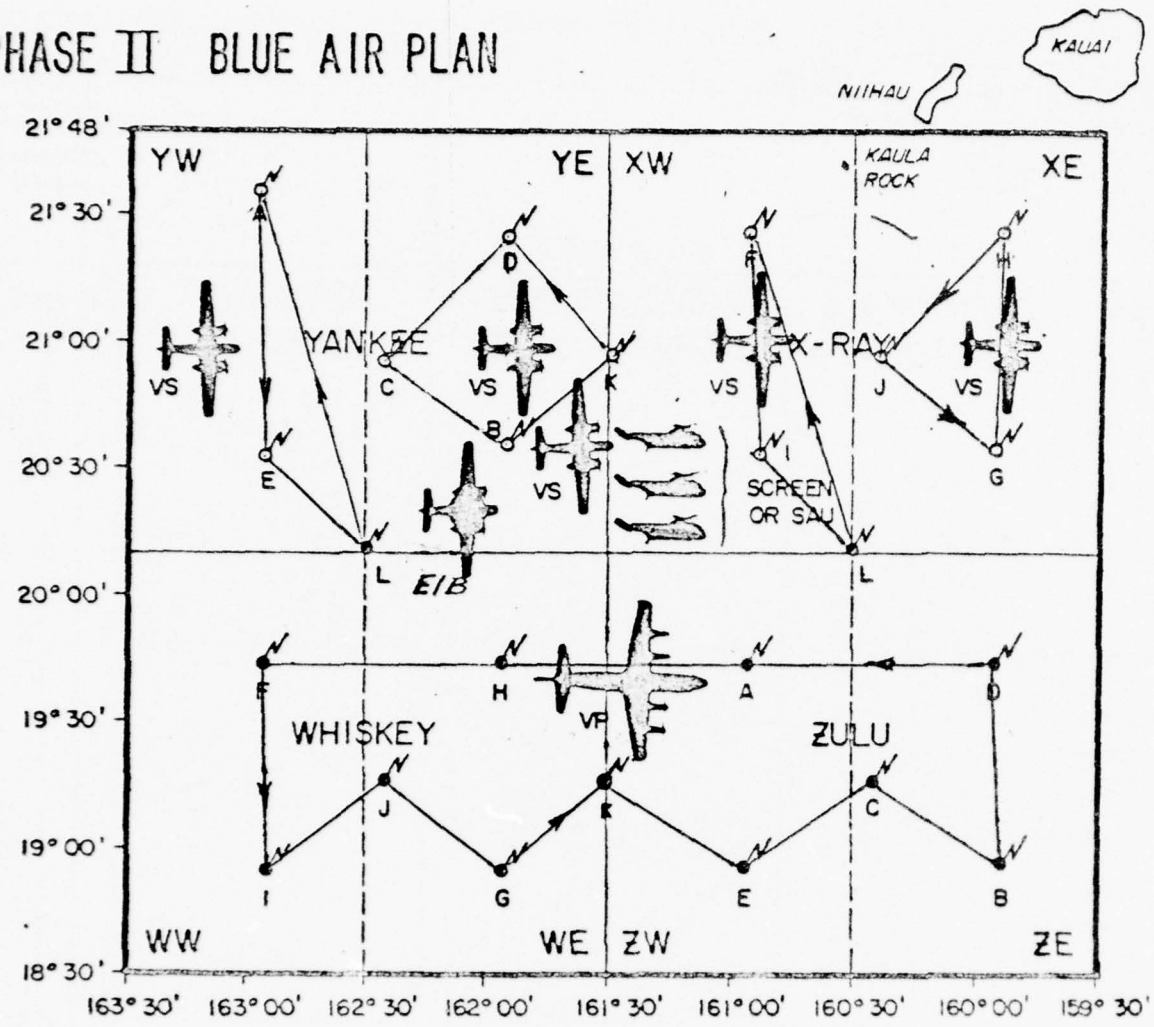

FIGURE 8

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PHASE II SONOBUOY DESIGNATION AND LOCATION

DATE

141600-191715

~~CVS/DE Op Ship~~

REF PT 20N 161W (Brng 090° 28NM from DLRP 20N 161-30W)

TABLE 9

AREA	DESIG	LAT (N)	LONG (W)	BRNG FM REF PT	RNGE FM REF PT	CHANNEL DESIG		
YANKEE	A	21-32	162-57	310°	142	16		
"	B	20-32	161-53	301°	60	14		
"	C	20-57	162-25	305°	100	12		
"	D	21-24	161-56	328°	100	10		
"	E	20-32	162-56	286°	113	8		
	L	20-08	162-30	275°	85	3		
ZULU	A	19-43	160-58	171°	17	16		
"	B	18-53	159-52	136°	92	14		
"	C	19-18	160-25	141°	54	12		
"	D	19-43	159-43	102°	72	10		
"	E	18-52	160-56	178°	67	8		
	K	19-18	161-30	215°	51	6		
XRAY	F	21-24	160-57	004°	85	13		
"	G	20-32	159-53	064°	71	11		
"	H	21-24	159-56	036°	103	9		
"	I	20-32	160-57	006°	32	7		
"	J	20-57	160-25	030°	65	5		
"	K	20-57	161-30	334°	64	6		
"	L	20-08	160-30	074°	28	3		
WHISKEY	F	19-43	162-57	261°	111	13		
"	G	18-53	161-52	216°	83	11		
"	H	19-43	161-53	250°	52	9		
"	I	18-52	162-56	238°	128	7		
"	J	19-18	162-25	242°	89	5		
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PHASE II S2E AIRCRAFT SONOBUOY MONITORING

DATE

141600-191715 CVS/DE Op Ship

REF PT 20N 161W (Brng 090° 28NM from DLRP 20N 161-30W)

ALTITUDE 1500'

TABLE 10

DEPART	CALL & SECTOR	BUOY DESIG	COURSE	SPEED	DIST	MIN	ARRIVE	BUOY DESIG	REMARKS
141600*	XE	G	355°	132	52	24	1624	H	
1624	XE	H	225°	132	40	18	1642	J	
1642	XE	J	128°	132	40	18	1700	G	
1700*	XE	G	355°	ETC.....					*
141600**	XW	L	345°	112	80	43	1643	F	
1643	XW	F	185°	112	53	28	1711	I	
1711	XW	I	135°	112	35	19	1730	L	
1730**	XW	L	345	ETC.....					**
141600*	YE	B	042°	150	34	14	1614	K	
1614	YE	K	319°	150	37	15	1629	D	
1629	YE	D	228°	150	40	16	1645	C	
1645	YE	C	129°	150	39	15	1700	B	
1700*	YE	B	042°	ETC.....				K	*
141600**	YW	L	344°	120	86	43	1643	A	
1643	YW	A	180°	120	61	31	1714	E	
1714	YW	E	134°	120	33	16	1730	C	
1730**	YW	L	344°	ETC.....					**

*REPEAT 1600-1700 TRACK EVERY HOUR

**REPEAT 1600-1730 TRACK EVERY 1 1/2 HOURS AT 0100, 0230, 0400, 0530, 0700, 0830, 1000, 1130, 1300, 1430, 1600, 1730, 1900, 2030, 2200, 2330.

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TITLE

PHASE II VP AIRCRAFT SONOBUOY MONITORING

DATE

141600-191715 CVS/DE Op Ship

REF PT 20N 161W (Brng 090° 28NM from DLRP 20N 161-30W)

ALTITUDE 1500'

TABLE 11

DEPART	SECTOR	BUOY DESIG	COURSE	SPEED	DIST	MIN	ARRIVE	BUOY DESIG	REMARKS
141600*	ZE	D	270°	173	68	24	1624	A	
1624	ZE	A	270°	173	51	18	1642	H	
1642	WW	H	270°	173	61	21	1703	F	
1703	WW	F	180°	173	52	18	1721	I	
1721	WW	I	047°	173	40	14	1735	J	
1735	WW	J	129°	173	40	14	1749	G	
1749	WW	G	038°	173	33	11	1800	K	
1800	ZE	K	129°	173	40	14	1814	E	
1814	ZE	E	051°	173	40	14	1828	C	
1828	ZE	C	128°	173	40	14	1842	B	
1842	ZE	B	007°	173	52	18	1900	D	
1900*	ZE	D	270°	173	68	ETC.....		REPEAT	

*1600 TRACK IS TO BE REPEATED EVERY THREE HOURS AT 0100, 0400, 0700, 1000, 1300, 1600, 1900, 2200.

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PHASE II COLD WAR USS PLUG TRANSIT

DATE

151709-161046 CVS/DE Op Ship

REF PT 20N 161-30W

TABLE 12

POINT	TIME	UNIT	BRNG FM REF PT	RNGE FM REF PT	CUS	SPD	DIST	REMARKS
PA	151709	PLUG	055°	138	260°	13	90	COMEX
PB	160000	PLUG	021°	69	260°	13	139	
PC	161046	PLUG	289°	119	260°	13	0	FINEX

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FIGURE 9

2.11 PHASE II HOT WAR. -

2.11.1 COMEX. Figure 10 depicts the disposition of forces at commencement of the Hot War and the surface operations during the period 162000-191715. WASP is operating close to the eastern boundary of area YANKEE. The operating forces are deployed and operate in the same manner as they did during the Cold War. Table 13 lists the ASW Group Navigation Track, Table 14 and 15 the SAU ALPHA and SAU BRAVO Navigation Tracks. Table 16 lists the formations and maneuvers for replenishment from a fleet oiler. The Air Plan, Helicopter Screen and Dip schedule, and Sonobuoy designations, locations and monitoring are the same as for Cold War operations. Environmental conditions are unchanged.

2.11.2 UNREP FROM FLEET OILER. -

2.11.2.1 POCOHANTAS ESCORTS. At 171740 BLUE OTC directs SAU ALPHA (DICK and HARRY) to rendezvous with fleet oiler POCOHANTAS at 172125 20N 159-30W and escort POCOHANTAS to the ASW Group; directs the ASW Group, SAU BRAVO and POCOHANTAS with escorts to rendezvous at 180400 21N 160-25W course 135T speed 12. Navigation track is listed in Table 14.

2.11.2.2 RENDEZVOUS AND UNREP. At 180400 POCOHANTAS, SAU BRAVO and the ASW Group rendezvous with POCOHANTAS as the Formation Center. The formations and maneuvers are as listed in Table 16. UNREP commences at 0410 and is completed at 0645. At 0645 the OTC detaches POCOHANTAS and directs SAU ALPHA to escort her out of the operating area.

2.12 EXECUTIVE TIMING SAMPLING. -

2.12.1 GENERAL. The test will be controlled from the Data Extraction Console of the Test Generation and Control System. Each sampling will consist of 3 minutes of operation, on same start time, e.g. 01 and 31, etc. During the test the tracking operators should sequence and update targets with maximum rapidity. (Details of Executive Timing Test are contained in TM 1029.)

2.12.2 TIME SCHEDULE. -

170200 to 170900

180400 to 180700

191200 to 191400

210900 to 211100

2.13 FINEX. FINEX is signaled by OTC at 191715.

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TITLE
PHASE II HOT WAR ASW GROUP NAVIGATION TRACK

DATE
162000-191715 ~~CVS/DE Op~~ Ship

DLRP 20N 161-30W

WASP ASW GROUP CENTER. FORMATION AND THREAT AXIS 000°

TABLE 13

POINT	TIME	UNIT	STATION (°T)	BRNG FM REF PT	RNGE FM REF PT	CUS	SPD	DIST	REMARKS
	162000	WASP*	0						CENTER
	"	VOGE*	3000						
	"	SMITH*	3270						
	"	JONES*	3090						
	"	JOHNSON*	3180						
A	162000	WASP	0	339°	75	075°	12	12	COMEX
B	2100	WASP	0	350°	75	130°	16	48	
C	170000	WASP	0	027°	45	250°	12	15	
D	0115	WASP	0	010°	36	160°	12	36	
E	0415	WASP	0	085°	18	010°	12	30	
F	0645	WASP	0	038°	38	155°	12	27	
G	0900	WASP	0	080°	35	080°	12	18	
H	1030	WASP	0	080°	53	142°	12	51	
I	1445	WASP	0	110°	90	090°	12	9	
J	1530	WASP	0	108°	99	330°	12	36	
K	1830	WASP	0	090°	76	310°	15	45	
L	2130	WASP	0	055°	50	050°	13	13	
M	2230	WASP	0	054	60	125°	15	30	
N	180030	WASP	0	075°	78	340°	12	42	
O	0400	POCOHANTAS	0	045°	85	135°	12	33	UNREP*
P	0645	WASP	0	067°	92	166°	20	38	
Q	0839	WASP	0	090°	93	292°	12	28	

*UNLESS OTHERWISE INDICATED OR DIRECTED BY OTC, DDS REMAIN AS STATIONED THROUGHOUT PHASE II HOT WAR

Observers **SEE TABLE 13A FOR RDVU AND UNREP FORMATION

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PHASE II HOT WAR ASW GROUP NAVIGATION TRACK

DATE
162000-191715

CVS/DE Op Ship

TABLE 13 (Cont)

POINT	TIME	UNIT	STATION (°T)	BRNG FM REF PT	RNGE FM REF PT	CUS	SPD	DIST	REMARKS
R	1100	WASP	0	081°	58	240°	12	36	
S	1400	WASP	0	101°	38	117°	12	44	
T	1740	WASP	0	110°	80	328°	12	76	
U	190000	WASP	0	041°	45	040°	12	24	
V	0200	WASP	0	041°	63	125°	12	18	
W	0330	WASP	0	055°	72	330°	15	54	
X	0640	WASP	0	020°	95	200°	12	36	
Y	0940	WASP	0	020°	60	000°	16	38	
Z	1200	WASP	0	012°	96	208°	13	55	
A'	1614	WASP	0	357°	45	158°	16	16	
B'	1715	WASP	0	000°	30				FINEX

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TITLE

PHASE II HOT WAR SAU "A" NAVIGATION TRACK

DATE

162000-191715

DLRP 20N 161-30W CVS - Op Ship

DICK SAU "A" GUIDE

TABLE 14

POINT	TIME	UNIT	STATION (°T)	BRNG FM REF PT	RNGE FM REF PT	CUS	SPD	DIST	REMARKS
A	162000	DICK	0	339°	75	065°	12	36	
		HARRY	12180						
AA	2300	DICK	0	005°	85	090°	12	96	
		HARRY	12180						
AB	170700	DICK	0	050°	134	180°	12	128	
		HARRY	12270						
AC	1740	DICK	0						
		HARRY	12285	113°	110	014°	12	45	
AD	2125	POCOHANTAS	0	090°	113	319°	12	79	GUIDE
		DICK	5.4274						
		HARRY	5.4004						
O	0400	POCOHANTAS	0	045°	85	135°	12	33	*
		DICK							*
		HARRY							*
P	0645	POCOHANTAS	0	066°	92	030°	12	27	
		DICK	5.4075						
		HARRY	5.4345						
AE		DICK	0	065°	125	315°	12	72	
		HARRY	12225						
AF		DICK	0	034°	119	270°	12	60	
		HARRY	12180						
AG		DICK	0	004°	99	180°	12	12	
		HARRY	12180						

*SEE TABLE 16 FOR RDVU AND UNREP FORMATION

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DATE
162000-191715

DLRP 20N 161-30W CVS Op Ship

DICK SAU "A" GUIDE

TABLE 14 (CONT)

POINT	TIME	UNIT	STATION (°T)	BRNG FM REF PT	RNGE FM REF PT	CUS	SPD	DIST	REMARKS
AH	2100	DICK	0	004°	87	090°	12	84	
		HARRY	12180						
AI	190400	DICK	0	046°	126	180°	12	144	
		HARRY	12270						
AJ	1600	DICK	0	123°	106	090°	12	12	
		HARRY	12270						
AK	1700	DICK	0	118°	117	000°	12	3	FINEX
		HARRY	12270						

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PHASE II HOT WAR SAU "B" NAVIGATION TRACK

DATE
162000-191715

DLRP 20N 161-30W CVS/DE Op Ship

KOELSCH SAU "B" GUIDE

TABLE 15

POINT	TIME	UNIT	STATION (°T)	BRNG FM REF PT	RNGE FM REF PT	CUS	SPD	DIST	REMARKS
A	162000	KOELSCH	0	339°	75	054°	12	24	
		TOM	12324						
BA	2200	KOELSCH	0	356°	85	270°	12	78	
		TOM	12180						
BB	0430	KOELSCH	0	315°	119	180°	12	49	
		TOM	12090						
BC	0835	KOELSCH	0	293°	91	270°	12	12	
		TOM	12090						
BD	0935	KOELSCH	0	290°	102	000°	12	57	
		TOM	12090						
BE	1420	KOELSCH	0	314°	132	090°	12	92	
		TOM	12180						
BF	2200	KOELSCH	0	357°	92	116°	12	72	
		TOM	12180						
O	170400	WASP	0	045°	85	135°	12	27	*
		~~KOELSCH~~	~~4315~~						*
		TOM	4225						*
BG	0615	KOELSCH	0	063°	90	283°	17	47	
		TOM	12180						
BH	0900	KOELSCH	0	034°	62	270°	12	116	
		TOM	12180						
BI	1840	KOELSCH	0	302°	95	180°	12	82	
		TOM	12090						

*SEE TABLE 16 FOR RDVU AND UNREP FORMATIONS

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PHASE II HOT WAR SAU "B" NAVIGATION TRACK

DATE

162000-191715

DLRP 20N 161-30W CVS/DE Op Ship

KOELSCH SAU "B" GUIDE

TABLE 15

POINT	TIME	UNIT	STATION (°T)	BRNG FM REF PT	RNGE FM REF PT	CUS	SPD	DIST	REMARKS
BJ	190130	KOELSCH	0	249°	82	090°	12	12	
		TOM	12090						
BK	0230	KOELSCH	0	245°	75	000°	12	114	
		TOM	12090						
BL	1200	KOELSCH	0	320	108	090°	12	12	
		TOM	12090						
BN	1300	KOELSCH	0	326°	99	180°	12	51	
		TOM	12090						
BN	1715	KOELSCH	0	299°	64				FINEX
		TOM	12090						

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TITLE
PHASE II HOT WAR ASW UNREP

DATE
180400-180645 CVS/DE Op Ship

DLRP 20N 161-30W COURSE 135' SPEED 12

POCOHANTAS UNREP CENTER, FORMATION AND THREAT AXIS 000°.

TABLE 16

TIME	UNIT	STATION	BRNG FM REF PT	RNGE FM REF PT	REMARKS
180400	POCOH	0	045°	85	RDVU FORMATION CENTER
0400	WASP	1315			PROCEED ALONGSIDE POCOHANTAS TO PORT
	VOGE	4000*			PROCEED ALONGSIDE WASP TO PORT
	KOELSCH	4315*			PROCEED ALONGSIDE POCOHANTAS TO STARBOARD
	DICK	4045*			
	SMITH	4270*			
	JONES	4090*			
	TOM	4225*			
	HARRY	4135*			
	JOHNSON	4180*			
0410	POCOH	0	047°	85	
	WASP	0			ALONGSIDE POCOHANTAS TO PORT
	VOGE	0			ALONGSIDE WASP TO PORT
	KOELSCH	0			ALONGSIDE POCOHANTAS TO STARBOARD
0440	POCOH	0	051°	86	
	WASP	0			ALONGSIDE POCOHANTAS TO PORT
	VOGE	0			BREAK AWAY FOR STA. 4000
	KOELSCH	0			BREAK AWAY FOR STA. 4315
	DICK	0			PROCEED ALONGSIDE WASP TO PORT
	SMITH	0			PROCEED ALONGSIDE POCOHANTAS TO STARBOARD

*ASSIGNED STATION EXCEPT WHEN ALONGSIDE FOR UNREP

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TITLE
PHASE II HOT WAR ASW UNREP

DATE
180400-180645 CVS/DE Op Ship

DLRP 20N 161-30W COURSE 135° SPEED 12

POCOHANTAS UNREP CENTER. FORMATION AND THREAT AXIS 000°.

TABLE 16 (cont)

TIME	UNIT	STATION	BRNG FM REF PT	RNGE FM REF PT	REMARKS
0450	POCOH	0	052°	86	
	WASP	0			ALONGSIDE POCOHANTAS TO PORT
	DICK	0			ALONGSIDE WASP TO PORT
	SMITH	0			ALONGSIDE POCOHANTAS TO STARBOARD
0520	POCOH	0	056°	87	
	WASP				ALONGSIDE POCOHANTAS TO PORT
	DICK				BREAKAWAY FOR STA 4045
	SMITH				BREAKAWAY FOR STA 4270
	JONES				PROCEED ALONGSIDE WASP TO PORT
	TOM				PROCEED ALONGSIDE POCOH TO STARBOARD
0530	POCOH				
	WASP				ALONGSIDE POCOHANTAS TO PORT
	JONES				ALONGSIDE WASP TO PORT
	TOM				ALONGSIDE POCOHANTAS TO STARBOARD
0600	POCOH				
	WASP	0			ALONGSIDE POCOHANTAS TO PORT
	JONES				BREAKAWAY FOR STA 4090
	TOM				BREAKAWAY FOR STA 4225
	HARRY				PROCEED ALONGSIDE WASP TO PORT
	JOHNSON				PROCEED ALONGSIDE POCOH TO STARBOARD
0610	POCOH				
	WASP				ALONGSIDE POCOHANTAS TO PORT
	HARRY				ALONGSIDE WASP TO PORT
	JOHNSON				ALONGSIDE POCOHANTAS TO STARBOARD
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PHASE II HOT WAR ASW UNREP

DATE

180400-180645 CVS/DE Op Ship

DLRP 20N 161-30W COURSE 135° SPEED 12

POCOHANTAS UNTEP CENTER, FORMATION AND THREAT AXIS 000°

TABLE 16 (cont)

TIME	UNIT	STATION	BRNG FM REF PT	RNG FM REF PT	REMARKS
0615	KOELSCH	4315			DETACHED. PROCEED IAW TABLE 15
	TOM	4225			DETACHED. PROCEED IAW TABLE 15
0645	POCOH	0			DETACHED. PROCEED IAW TABLE 16
	WASP	0			BREAKAWAY. PROCEED IAW TABLE 13
	HARRY	0			DETACHED. PROCEED IAW TABLE X
	JOHNSON	0			BREAKAWAY. PROCEED IAW TABLE 13
	VOGE	4000			PROCEED IAW TABLE 13
	DICK	4045			DETACHED PROCEED IAW TABLE X
	SMITH	4270			PROCEED IAW TABLE 13
	JONES	4090			PROCEED IAW TABLE 13

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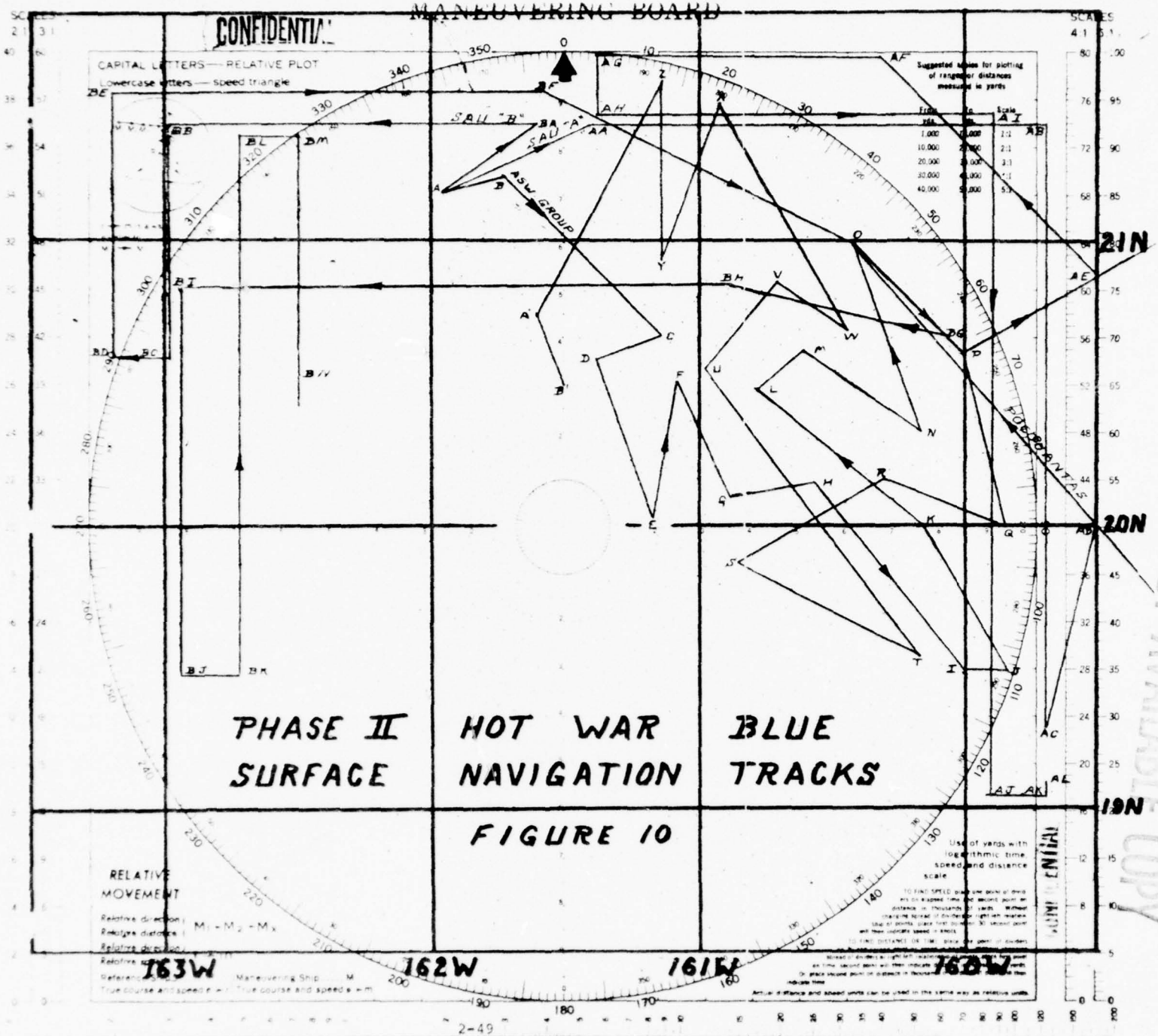
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CAPITAL LETTERS — RELATIVE PLOT
Lowercase letters — speed triangle
SAU "B"
SAU "A"
ASW GROUP
CANTAS
21N
20N
19N
163W
162W
161W
160W
PHASE II
SURFACE
HOT WAR
NAVIGATION
BLUE
TRACKS
FIGURE 10
RELATIVE MOVEMENT
Maneuvering Board
BEST AVAILABLE COPY

SECTION III

3.1 OBJECTIVE. The objective of Section III is to provide opportunity for maximum exercise ASW weapon attacks on submarine in semi-controlled conditions, and to a lesser degree, to provide opportunities to exercise non-ASW weapons on surface and air targets.

3.2 BLUE PLAN. The BLUE ASW Group will be in Carrier Ready Formation 40 (Form 40), Axis 000°. Either the CVS or a DE may be the Operational Ship. WASP will be the Formation Center and Guide. The ASW Group navigation track and formation is indicated in Table 11 and Figure 31. Each weapon system of the DEs and the CVs will be exercised at least once. Attacks will be limited to conventional weapons.

3.3 PURPLE PLAN. This section is designed for maximum exercise ASW weapons expenditure. In pursuit of this objective, PURPLE submarines will frequently expose themselves and force contact. PURPLE units will not fire their weapons during this phase of the exercise. PURPLE navigation tracks and contacts. are contained in Section IV Prohibited Section.

3.4 WEAPONS. The DE ASW weapons to be tested are ASROC depth charge, ASROC torpedo, DASH, MK-37 torpedo and MK-46 torpedo. Additionally, the A4 interceptor aircraft aboard WASP, and the TERRIER SAM systems on JOHNSON will be kept in Readiness Condition ONE and will be launched at least once. To assure that all weapons are used at least once, OTC has directed that weapons be used as indicated when target is at the following ranges.

WEAPON	TARGET
MK 46 MOD 0 Torpedo	SUB 0-5,000 yards
MK 37 MOD 1 Torpedo	SUB 5-8,000 yards
ASROC Depth Charge	SUB 8-12,000 yards
ASROC Torpedo	SUB 12-16,000 yards
DASH	SUB 7-16,000 yards
5 guns	SURF 0-15,000 yards
Terrier	AIR 15-30,000 yards
A4	AIR 30-100 NM

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TITLE
PHASE III ASW GROUP NAVIGATION TRACK

DATE
200000-220000

DLRP 20N 161-30W

CVS/DE OpShips

TABLE 31

POINT	TIME	UNIT	STATION (°T)	BRNG FM DLRP	RNGE FM DLRP	COURSE	SPEED	DIST	REMARKS
COMEX	200000	WASP	0	000	90	180	15		CENTER
	"	TOM	4.5000						
	"	KOELSCH	4.5315						
	"	JOHNSON	4.5045						
	"	HARRY	4.5270						
	"	JONES	4.5090						
	"	DICK	4.5225						
	"	VOGE	4.5135						
	"	SMITH	4.5180						
	"	H-1	8.0315						
	"	H-2	8.0045						
	"	H-3	8.0225						
	"	H-4	8.0135						
A	200000	WASP	0	000	90	180	15	140	
B	0920	WASP	0	180	50	281	15	118	
C	1032	WASP	0	200	50	000	15	135	
D	1932	WASP	0	349	90	252	15	22	
	2100	WASP	0	335	90	180	15	127	
E	210530	WASP	0	220	60	100	15	60	
G	0930	WASP	0	160	60	000	14	144	
H	1948	WASP	0	013	90	107	15	119	
I	2104	WASP	0	025	90	180	15	44	
J	220000	WASP	0	046	53	FINEX			
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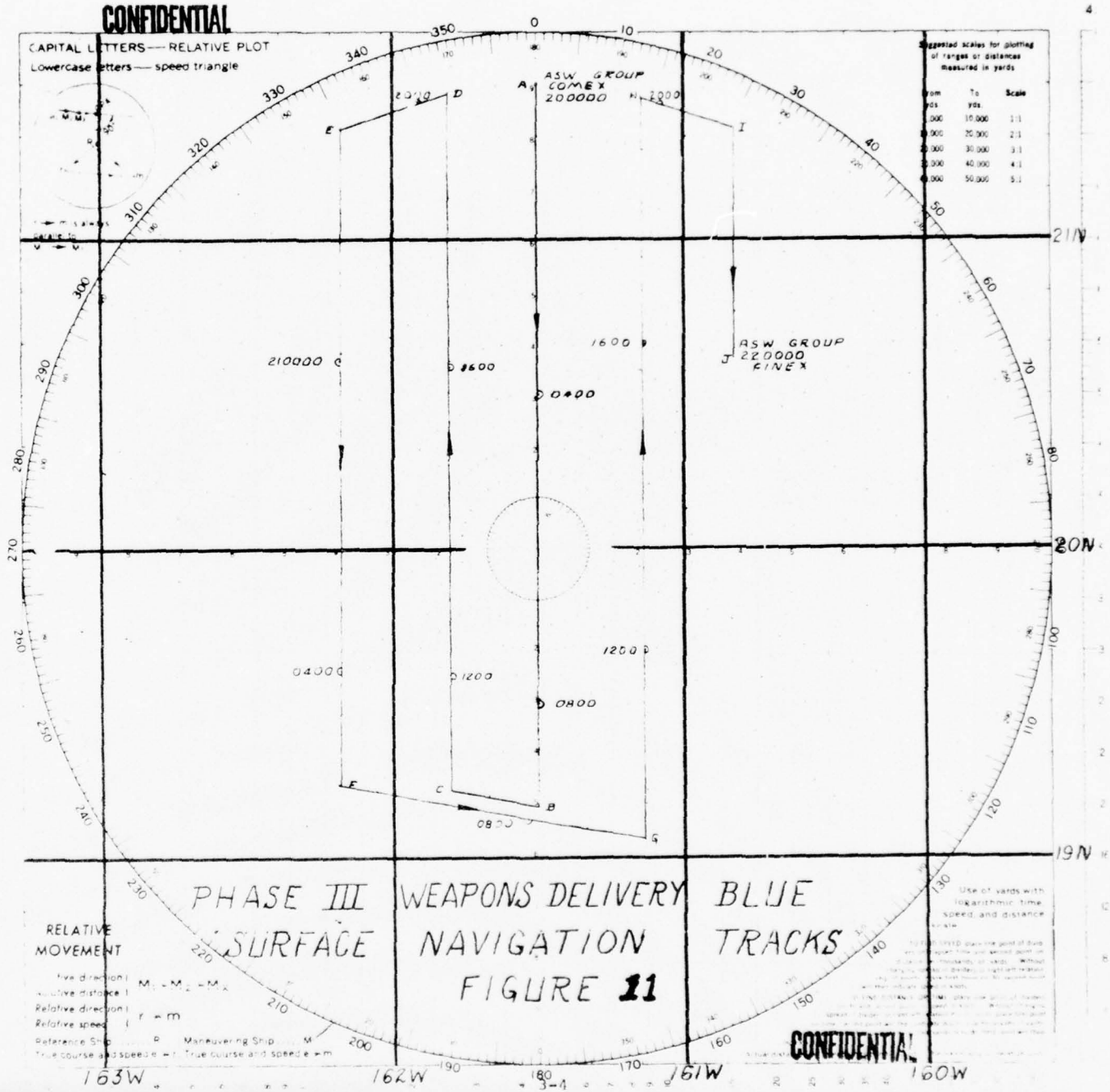

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SECTION IV

PROHIBITED SECTION

4.1 GENERAL. In a normal Operational Readiness Evaluation, except for boundaries and safety considerations, the BLUE or ASW Group, and the PURPLE submarines are pitted against each other. Each side attempts to "destroy" the adversary without loss to his own force. Every trick of the trade is used to deceive the opponents. The objective is to demonstrate each group's readiness and ability to carry out typical ASW missions.

For demonstrating the ASWSC&CS, the situation is somewhat different. The sensory equipment has been tested and widely used. Only the computerized digital data processing system and communication links are undergoing test and evaluation. Accordingly, it is desireable for the submarines to force contact more frequently than otherwise might be prudent in order to maximize testing in a minimum length of time, consistent with exercise objectives.

4.2 PHASE I PART I - NARROW PASSAGE. -

4.2.1 CORK'S TRACK. CORK's track is depicted in Figure 41 and listed in Table 41. CORK enters the eastern boundary of the area at 130900 at periscope depth. Varying depth from 50' to 500' CORK makes contact with DICK at 1420, KOELSCH at 1815, and TOM at 1948 as listed in Table 42.

4.2.2 Expected Results. -

4.2.2.1 DICK's CONTACT. At 1420 DICK receives a sonar contact bearing 068T 6000 yards. It is anticipated that DICK will

track the contact to determine CORK's course and speed. Once this is determined, DICK should change course and speed to intercept the contact. DICK should report the initial contact to COMASWBLUE and the ASW Group via Barrier Reporting Net #2 and keep BLUE units informed of the status of the contact. The Operational Ship should plot the contact, attempt to identify the type of submarine, and pass information on the contact to other BLUE units via Link 11 and 14.

4.2.2.2 KOELSCH's CONTACT. About 1425 KOELSCH should receive DICK's contact report and should anticipate CORK's passage about 1900. At 1815 KOELSCH receives a sonar contact bearing 125T 8200 yards. It is anticipated that KOELSCH will track the contact to determine CORK's course and speed. Once this is determined, KOELSCH should change course and speed to close the contact. KOELSCH should report the contact to COMASWBLUE and C&CS Ships via Link 11, and other ships in the ASW Group via Link 14. Amplifying reports should also be sent via the same channels.

4.2.2.3 TOM's CONTACT. TOM should anticipate contact with CORK about 2000. At 1948 TOM receives a sonar contact bearing 325T 6800 yards. As KOELSCH still holds the contact, TOM should verify KOELSCH's contact information via Barrier Reporting Net #2 and keep BLUE units informed of the position of the contact. It is anticipated that TOM will alter course and speed as required to track the contact.

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TITLE

PHASE I PART I CORK TRANSIT

DATE

130900-141200 PROHIBITED SECTION

REF PT 21N 159W (Brng 067° 154NM from DLRP 20N 161-30W)

DE OPERATIONAL SHIP

TABLE 41

TIME	BRNG FM REF PT	RNGE FM REF PT	COURSE	SPEED	DIST	MIN	TARGET	TARGET BRNG	TGT RNGE
130900	080°	58	233°	9.5	9	57			
0957	085°	50	263°	9.5	10	63			
1100	085°	40	298°	9.5	14	88			
1228	070°	30	281°	9.5	13	82			
1350	060°	19	231°	6.0	3	30			
1420	050°	17	231°	6.0	6	60	DICK	248°	6,000
1520	050°	10	304°	9.0	6	40			
1600	015°	10	256°	7.0	21	180	DROP	DROP	DROP
1850	287°	18	256°	7.0	20	10	KOELSCH	305°	8,200
1900	286°	23	206°	7.0	6	48	TOM	145°	6,800
1948	266°	21	206°	7.0	8	72	DROP	DROP	DROP
2100	251°	24	335°	11.0	14	76			
2216	280°	30	315°	6.0	10	104			
130000	FINEX								

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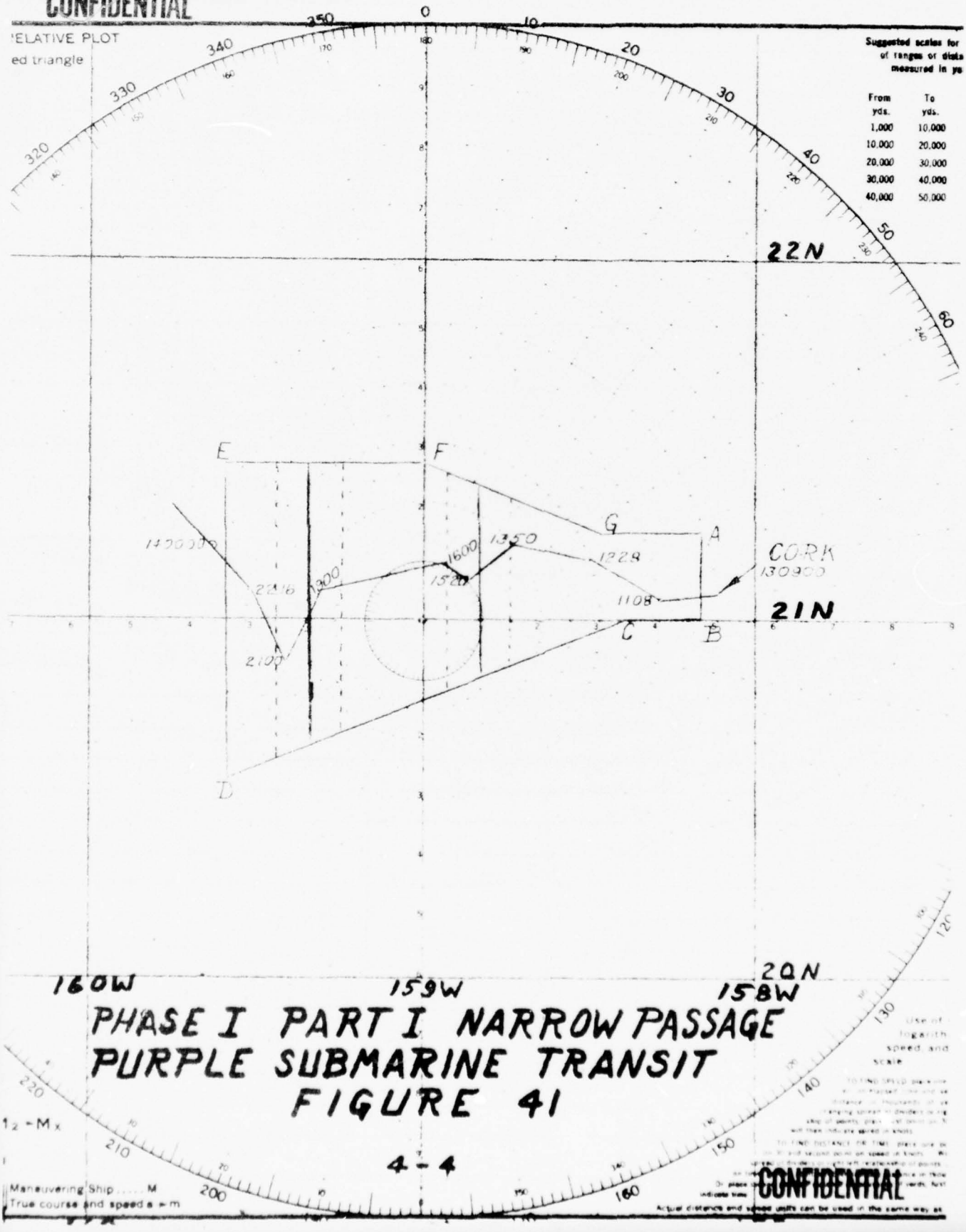

PHASE I PART I NARROW PASSAGE
PURPLE SUBMARINE TRANSIT
FIGURE 41

4-4

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CALCULATION SHEET

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TABLE 42 PHASE I PART I CORK TRANSIT AND TARGET OBSERVER's DATA SHEET

130900 - 141200 PROHIBITED SECTION

OB OPERATIONAL SHIP

(SEE TABLES 1, 2, 5 AND FIGURES 1, 2, 41 FOR ADDITIONAL

INFORMATION.)

INPUT							RESPONSE										
TIME	UNIT (O.S.)	SONAR BRNG	SONAR RANGE	TARGET COURSE	TARGET SPEED	TARGET DEPTH	O.S. COURSE	O.S. SPEED	SONAR BRNG	SONAR RANGE	TARGET COURSE	TARGET SPEED	TIME c/c INTC	TIME c/s INTC	RPT SENT OP SHIP	RPT RCED OP SHIP	RPT CIC NET #
131420	Dick	068	6000	231	6.0	200	000	12									2
1520				304	9.0	400											2
1600	Drop																
131850	Collach	125	8200	256	7.0	400	180	15									LINK
1900				206	7.0	350											LINK
2000	Drop																
[illegible]	Tom	305	6800	206	7.0	500	180	15									2
2100				335	11.0												2
						300											
2215	Drop																

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4.3 PHASE I PART II - BROAD PASSAGE. -

4.3.1 STOPPER's TRANSIT. STOPPER track is depicted in Figure 42 and listed in Table 43. STOPPER enters the eastern boundary of the area at 130900. Alternately submerging and snorkeling, STOPPER excites sonobuoys from 131134 through 1332, radar and sonobuoys from 131341 through 1819, and 131924 through 2151. A false visual contact is simulated at 131953 (nite) for one minute at a distance of 12 miles. STOPPER course is 270T and speed is varied 1.8 to 8.0 knots. Target simulations are received by sonobuoys for transmission to BLUE VP ANEW aircraft as listed in Table 44.

4.3.2 EXPECTED RESULTS. -

4.3.2.1 SONOBUOY CONTACT. At 131239 Sonobuoy #7 (SB-7) transmits to a BLUE P3 VP ANEW aircraft a target indication bearing 125T. The P3 should transmit this information to COMASWBLUE and C&CS ships via Link 11, and other BLUE units via Link 14. At 1252 SB-11 transmits to the same P3 a target indication bearing 135T. The P3 should transmit this information as before. This information should enable the Operational Ship to determine the approximate position of STOPPER. The Operational Ship may direct the P3 to try to localize the contact.

4.3.2.2 RADAR - SONOBUOY CONTACT. At 121434 the VP ANEW P3 radar receives a brief one minute contact of a snorkeling submarine. At 1435 the submarine submerges and the contact is

lost. The P3 should transmit this information via Link 11 and Link 14 to BLUE units. At 1439 SB-7 transmits to the P3 a target indication bearing 250T. The P3 should transmit this information to BLUE units. This information should enable the Operational Ship to determine STOPPER's approximate position. The OPSHIP may direct the P3 to try to localize the contact. At 1452 SB-11 transmits to the P3 a target indication bearing 153T. The P3 should send this information to BLUE units. This information should enable the Operational Ship to determine the position, course and speed of STOPPER.

4.3.2.3 VISUAL CONTACT. At 121953 the P3 sends a Link 11 and Link 14 message that he made brief contact with a periscope bearing 275T range 12 NM course 000T speed 2K. In view of the range to the contact, small size, slow speed, and reduced visibility, it is expected that the Operational Ship will evaluate the contact as false.

4.3.2.4 SONOBUOY CONTACTS. At 122016 Sonobuoy SB-13 transmits to the P3 a target indication bearing 105T which should be relayed to BLUE units via Link 11 and Link 14. At 2025 the P3 radar picks up a target bearing 161T 27 NM which should be relayed to BLUE units via Link 11 and Link 14. This information should enable the Operational Ship to update the predicted position of the contact. At 2052 SB-11 transmits to the P3 a

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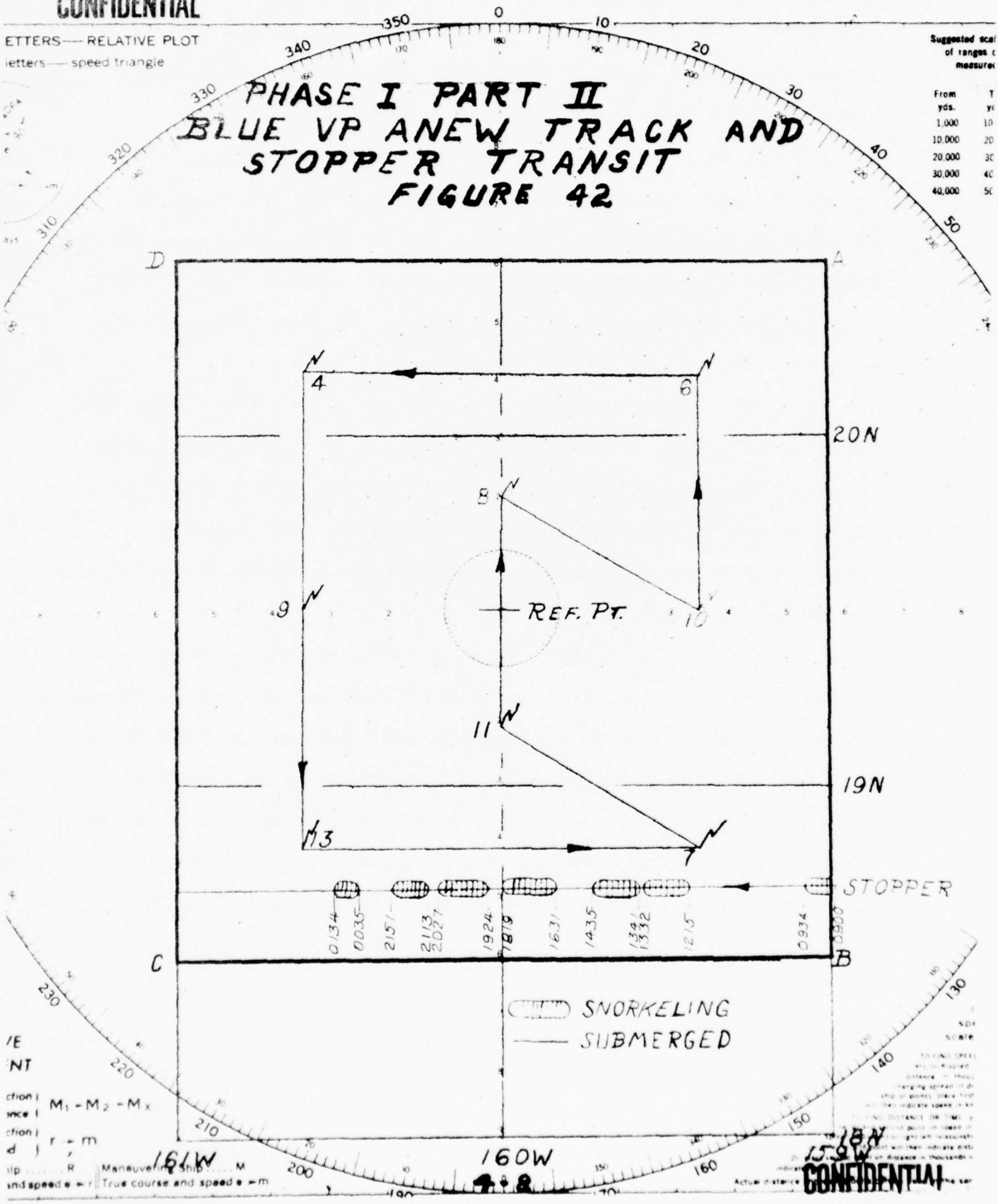
PHASE I PART II
BLUE VP ANEW TRACK AND STOPPER TRANSIT
FIGURE 42



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TITLE
PHASE I PART II STOPPER TRANSIT

DATE
130900-141200 CVS/DE OpShip

REF PT 19-30N 160W (Brng 110° 90NM from DLRP 20N 161-30W)

STOPPER COURSE 270°

TABLE 43

STOPPER TRACK

TIME	BRNG FM REF PT	RNGE FM REF PT	SPEED	SNORT					
130900	130°	74	4.5	START					
0934	132°	72	4.5	STOP					
1215	146°	58	6.0	START					
1332	153°	54	8.0	STOP					
1341	154°	53	8.0	START					
1435	161°	50	3.8	STOP					
1631	170°	48	5.0	START					
1819	180°	48	3.0	STOP					
1924	184°	48	8.0	START					
2027	193°	49	5.0	STOP					
2113	196°	50	5.7	START					
2151	201°	51	2.5	STOP					
140035	208°	54	4.0	START					
0134	211°	55	1.8	STOP					
1200	232°	77	FINEX						

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(IND-NEL-3900/17 (REV. 12-63)

CALCULATION SHEET

U. S. NAVY ELECTRONICS LABORATORY, SAN DIEGO, CALIF. 92152

TITLE TABLE 44 PHASE I PART II STOPPER TARGET AND TRANSIT OBSERVER'S DATA SHEET

DATA 130900 - 141200 PROHIBITED SECTION

VP ANEW AIRCRAFT - CVS/DE OPERATIONAL SHIP

(SEE TABLES 3, 4, 5, 43 AND FIGURES 1, 3, 48 FOR ADDITIONAL INFORMATION.)

TIME	SENSOR	TARGET BRNG	TARGET RANGE	TARGET COURSE	TARGET SPEED	TARGET DEPTH	O.S. COURSE	O.S. SPEED	SENSOR	TARGET BRNG	TARGET RANGE	TARGET COURSE	TARGET SPEED	TARGET DEPTH	RPT SENT UP SHIP	RPT REC UP SHIP
131239	SB-7	125				Snorkel	090	180								
1243	Drop	→				→										
1252	SB-11	135				Snorkel	300	180								
1256	Drop	→				→										
121434	RADAR	162	8	270	8.0	Snorkel	090	180								
1435	Drop	→				→										
1439	SB-7	250				100	090	180								
1443	Drop															
1452	SB-11	153				100	300	180								
1456	Drop	→				→										
121953	Visual*	275	12	000	8.0	Periscope	270	180								
1954	Drop	→				→										
2016	SB-13	105				Snorkel	180	180								
2020	Drop	→				→										
2025	RADAR	161				Snorkel	090	180								
2027	Drop	→				→										
2052	SB-11	204				100	300	180								
2056	Drop															
	* False Contact															

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CALCULATION SHEET

U. S. NAVY ELECTRONICS LABORATORY, SAN DIEGO, CALIF. 92152

TITLE: TABLE 44 PHASE I PART II STOPPER TARGET AND TRANSIT OBSERVER's DATA SHEET

DATA: 130900 - 141200 PROHIBITED SECTION

VP ANEW AIRCRAFT – CVS/DE OPERATIONAL SHIP

(SEE TABLES 3, 4, 5, 43 AND FIGURES 1, 3, 42 FOR ADDITIONAL INFORMATION.)

TIME	SENSOR	TARGET BRNG	TARGET RANGE	TARGET COURSE	TARGET SPEED	TARGET DEPTH	O.S. COURSE	O.S. SPEED	SENSOR	TARGET BRNG	TARGET RANGE	TARGET COURSE	TARGET SPEED	TARGET DEPTH	RPT SENT UP SHIP	RPT REC UP SHIP
131239	SB-7	125				Snorkel	090	180								
1243	Drop	→				→										
1252	SB-11	135				Snorkel	300	180								
1256	Drop	→				→										
121434	RADAR	162	8	270	8.0	Snorkel	090	180								
1435	Drop	→				→										
1439	SB-7	250				100	090	180								
1443	Drop															
1452	SB-11	153				100	300	180								
1456	Drop	→				→										
121953	Visual*	275	12	000	2.0	Periscope	270	180								
1954	Drop	→				→										
2016	SB-13	105				Snorkel	180	180								
2020	Drop	→				→										
2025	RADAR	161				Snorkel	090	180								
2027	Drop	→				→										
2052	SB-11	204				100	300	180								
2056	Drop															

* False Contact

SHEET ___ OF ___ SHEETS

target indication bearing 204T which should be sent to BLUE units. The OPSHIP should again update the predicted track of the contact and will probably classify the goblin as a "probable" submarine.

4.4 PHASE I PART III - TRAINING. -

4.4.1 BOGEY AND SKUNK CONTACTS. BLUE A3 aircraft (bogeys) and SH3 helicopters (skunks) approach ASW Group as indicated in Figure 43 and Table 44.

4.4.2 BOGEY ONE. At 131000 one BLUE A3 departs the northwest tip of Oahu Island on a southwest course at high altitude. At 131005, WATCHDOG VOGE's air search radar picks up the bogey bearing 080T 60 NM, course 240T, speed 360K. At 1015 WASP's air search radar picks up the bogey bearing 045T 107NM, course 225T, speed 360K, altitude 5,000 feet.

4.4.3 EXPECTED RESULTS. It is expected that VOGE will send a Link 11 Data Message to BLUE ASWSC&CS units, and a Link 14 meassage to other BLUE units. WASP should launch two A4 aircraft to intercept the bogey. The Operational Ship should direct one or more units of the BLUE ASW Group to engage the target. WASP should update the position of the bogey via Link 11 and Link 14 as it approaches the ASW Group.

4.4.4 SKUNK ALPHA. At 131105 one BLUE helicopter (simulated PT boat) approaches the ASW Group on a zig-zag southwesterly course. At 1105 SMITH's surface search radar picks up the bogey bearing 040T 36NM course 180T speed 40K. At 1108 WASP's radar picks up the skunk bearing 045T 36NM, course 180T, speed 40K.

4.4.5 EXPECTED RESULTS. It is expected that SMITH will report the skunk by Surface Reporting Net #3, keep BLUE units informed of the position of the skunk, and engage the target with GFCS. The Operational Ship should direct one or more units of the BLUE ASW Group to engage the target. As the skunk approaches the force WASP should update its' position via Link 11 and Link 14.

4.4.6 SKUNK BRAVO AND BOGEY TWO. At 131515 one BLUE helicopter approaches the ASW Group on a zig-zag westerly course. At 1515 HARRY's surface search radar picks up SKUNK BRAVO bearing 086T 24NM, course 248T, speed 40K. At 1518 WASP picks up the skunk bearing 088T 24NM, course 248T, speed 40K.

At 131530 one BLUE A3 departs Kaula Rock on a southwesterly course as a low flyer. At 1535 WATCHDOG VOGE's air search radar picks up Bogey TWO bearing 045T 36NM, course 253T speed 360K. At 1553 WASP's radar picks up the bogey bearing 007T 42NM, speed 360K, altitude 50 feet.

4.4.7 EXPECTED RESULTS. HARRY should report Skunk TWO via Surface Reporting Net #3, keep BLUE units informed of the position of the target, and engage it with GFCS. The Operational Ship should direct one or more ships of the ASW Group to engage the target. WASP should update the target's position via Link 11 and Link 14.

VOGE should send a Link 11 Data Message to BLUE ASWSC&CS units and a Link 14 message to other BLUE units. WASP should launch two A4 aircraft to intercept Bogey TWO. The Operational Ship should direct one or more units of the BLUE ASW Group to

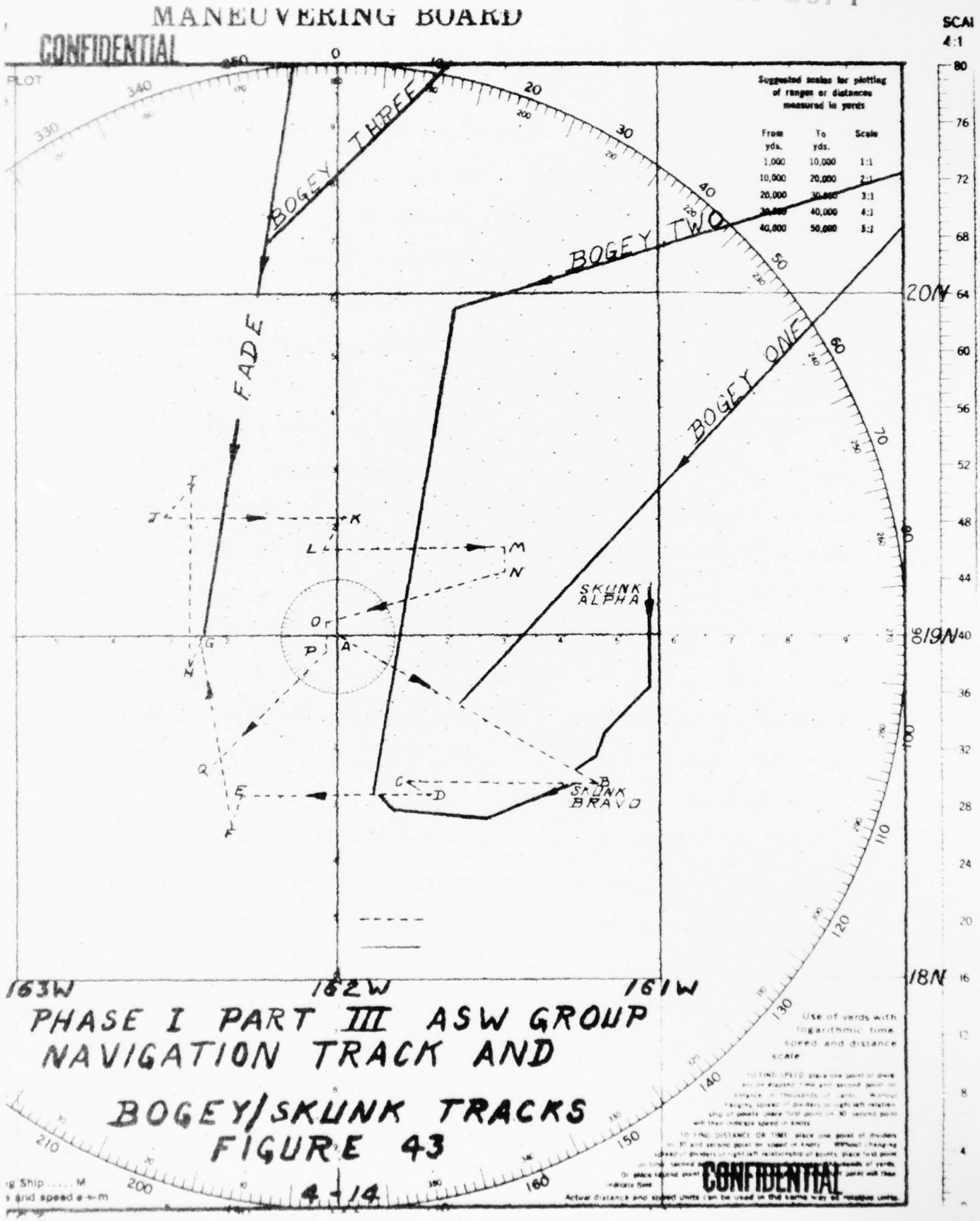
engage the bogey. WASP should update the position of the target as it approaches the ASW Group.

4.4.8 BOGEY THREE. At 132000 one BLUE P3A departs Kaula Rock on a southwesterly course as low flyer and night heckler. At 2019 VOGE detects the bogey bearing 013T 40NM, course 227 speed 300. At 2033 the contact enters a fade. At 2037 the E1B airborne picket picks up the bogey bearing 332T 17NM, course 188T, speed 300K. At 2038 WASP picks up the bogey bearing 007T 37NM, course 188T speed 300K.

4.4.9 EXPECTED RESULTS. VOGE should send a Link 11 Data Message to ASWSC&CS units, and a Link 14 message to other BLUE units. The Operational Ship should direct DLG JOHNSON via Link 11, to engage the bogey with TERRIER missile system. The OPSHIP may direct via Link 14 other BLUE units to engage the bogey. WASP and/or JOHNSON should update the position of the bogey via Link 11 and Link 14 as it approaches the ASW Group. The E1B should send via Aircraft Reporting Net #4 a position report on the approaching bogey.

4.5 PHASE II COLD WAR. -

4.5.1 SITUATION. Phase II from 141600 to 191715 is a combined Cold and Hot War situation. The area of operations is about 195 miles by 225 miles. The BLUE Task Group will conduct surface and sub-surface surveillance operations in the area with assigned air and surface units, and supporting VP (non-ANEW) aircraft. BLUE forces will escort and provide ASW protection for designated logistic ships entering or transiting the area.



PHASE I PART III ASW GROUP NAVIGATION TRACK AND BOGEY/SKUNK TRACKS FIGURE 43

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TASK IV PHASE I PART II A/W GROUP BOGEY/SKUNK DETECTIONS OBSERVER'S DATA SHEET

PROHIBITED SECTION

PT 145 (FM (BRNG 255T 67NM FROM DLRF)

OPERATION SHIP

(SEE TABLE 4.3 AND FIGURES 5, 43 FOR ADDITIONAL INFORMATION.)

INPUT								RESPONSE											
TIME (G.M.)	UNIT TYPE	TARGET TYPE	BRNG FM RCE PT	RANGE FM REF PT	COURSE	SPEED	ALT	O.S. COURSE	O.S. SPEED	TIME C/C	TIME C/S	TIME T&T Lead	TGT COURSE	TGT SPEED	TGT ACT	TIME CPA	TIME AR/WPN	TALLYHO	RPT SENT OPSHIP
121005	VOGE	MSPF A/C	057	130	240	360	5,000	020	16										
1015	VOGE		055	113	225														
1015	WASP		055	113	225														
1020	WASP		058	84	225														
1030	WASP		120	25	225														
1031	DROP																		
121105	SMITH	PT	072	55	180	40		020	16										
1105	WASP		081	55	180	40													
1135	WASP		100	55	202	40													
1150	WASP		110	50	200	50													
1155	WASP		115	50	237	60													
1205	WASP		120	47	300	20													
1211	DROP																		
121145	BARRY	PT	132	48	248	40		270	12										
1218	WASP		125	47	248	40													
1232	WASP		141	41	276	60													
1255	WASP		163	33	317	60													
121135	VOGE	MSPF A/C	087	111	253	360	50												
1206	VOGE		090	91	109	360	50												
1230	WASP		43	59	189	360	50												
1240	DROP																		

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U. S. NAVY ELECTRONICS LABORATORY, SAN DIEGO, CALIF. 92152

TABLE 45 (CONT)

INPUT								RESPONSE											
TIME	UNIT O.S.	TARGET TYPE	BRNG FM REF. PT	RANGE FM REF PT	COURSE	SPEED	ACT	O.S. COURSE	O.S. SPEED	TIME	TIME C/S	TIME TOT	TOT Design COURSE	TOT SPEED	TOT ALT	TIME CPA	TIME AB/WTR	TALLYHO	RPT SEMT OPSHIP
132019	VOGE	SAT A/C	016	115	227	300	50	350	12										
2031	VOGE		350	70	188	300	50												
2033	VOGE		FADE	FADE	FADE	FADE	FADE												
2037	ELB		335	41	188	300	50												
2038	WASP		330	37	188	300	50												
2045	WASP		265	24	188	300	50												
2046	DROP																		

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During the Cold War BLUE forces will attempt to locate and track PURPLE submarines in the area. Upon receipt of a declaration of war, BLUE forces will seek out and destroy PURPLE submarines, PT boats, and aircraft in the area.

4.5.2 FAST SUB-SAU BRAVO INCIDENT. At 142030 CORK detects SAU BRAVO consisting of KOELSCH and TOM at 9,000 and 12,000 yards respectively. CORK closes the contact and tracks KOELSCH and TOM until they conduct hold-down tactics. At this time CORK makes a 358° port turn at 8 knots, then a 358° starboard turn at 12 knots, in an attempt to break the contact. Contact is broken at 2300. CORK navigation track and simulations are depicted in Tables 46 and 46A, and Figure 44.

4.5.3 EXPECTED RESULTS. KOELSCH and TOM should alter course and speed as required to track and hold down the goblin. KOELSCH should report the contact by Link 11 Data Message to ASWSC&CS units and other BLUE units by Link 14. Amplifying reports should also be sent via the same channels.

4.5.4 SLOW SUB-PLUG INCIDENT. At 151238 Sonobuoy #XI (SB-XI) transmits to a BLUE S2E aircraft a contact bearing 199T, and at 1408 bearing 062T. At 2000 STOPPER sights PLUG bearing 068T 6800 yards and PLUG's sonar has a contact bearing 248T 6800 yards as STOPPER is turning away to course 135T 4 knots. At 2122 the S2E and PLUG picks up a surface radar contact bearing 084T 14NM. STOPPER attempts to break contact by diving below the layer (300'), running quietly, and making a square three miles to a side on courses 135T at 4 knots, 225T at 8 knots, and 315T at 12 knots. STOPPER then parallels PLUG's course for about two hours.

4.5.5 EXPECTED RESULTS. The S2E should report the sonobuoy contact via Barrier Net #2. The OPSHIP should relay the information to other BLUE units via Link 11 and 14, and may direct the S2E to localize the contact. When PLUG and its S2E escort detect STOPPER by radar, they also should report the contact by Surface Reporting Net #3. The OPSHIP should relay the information to other BLUE units via Link 11 and 14, and may direct PLUG and its S2E escort to localize the contact. STOPPER navigation track and simulations are depicted in Tables 47, 47A and Figure 44.

4.5.6 SNOOPER AIRCRAFT. At 142045 a PURPLE A3 approaches the operating area at 3000 feet, and enters the area in the vicinity of 21-40N 160-30W course 210T speed 360K. At 142125 WASP picks up the high speed bogey bearing 208T 60NM, course 210T, speed 360K. At 2145 the bogey enters a fade and the contact is lost. At 2150 SAU ALPHA with DICK and HARRY pick up the bogey bearing 278T 48NM, course 085T, speed 360K.

4.5.7 EXPECTED RESULTS. WASP should report the bogey to ASWSC&CS ships via Link 11 and other BLUE units via Link 14. WASP will probably launch two A4 aircraft to intercept the bogey. The Operational Ship may direct one or more BLUE units to engage the target. DICK should report the bogey to the ASW Group over Air Reporting Net #4 and engage the target.

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DATA SHEET
11ND-NEL-5220/1 (REV. 9-64)

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SAN DIEGO, CALIFORNIA 92152

TITLE
PHASE II CORK COLD WAR NAVIGATION TRACK

DATE
141600-162000 PROHIBITED SECTION

DLRP 20N 161-30W

CVS/DE OpShip

TABLE 46

TIME	BRNG FM REF PT	BRNG FM REF PT	COURSE	SPEED	DIST	TIME	TARGET	TGT BRNG	TGT RNGE
141600	284°	51	330°	11.3	51	4+30			
2030	308°	96	151°	8.0	6	45	KOELSCH	330	9,000
							TOM	061	12,000
2115	305°	99	332°	8.0	6	45	KOELSCH		
							TOM		
2200	308°	96	151°	12.0	6	30	KOELSCH		
							TOM		
2230	310°	93	330°	12.0	6	30	KOELSCH		
							TOM		
2300	308°	96	090°	8.3	25	2+30	DROP	DROP	DROP
150200	140°	79	140°	9.7	29	3+00			
0500	320°	50	190°	11.0	66	6+00			
1100	238°	51	238°	7.2	29	4+00			
1500	238°	80	040°	6.6	33	5+00			
2000	250°	50	250°	5.0	15	3+00			
2300	250°	65	250°	5.0	10	2+00			
160100	250°	75	052°	7.0	14	2+00			
0300	255°	62	260°	7.0	14	2+00			
0500	260°	50	260°	6.0	24	4+00			
0900	260°	74	070°	6.5	26	4+00			
1300	265°	50	265°	5.0	20	4+00			
1700	265°	70	030°	13.3	40	3+00			
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TABLE 46A PHASE II COLD WAR CORK TARGET SHIP OBSERVER'S DATA SHEET

141600-162000 PROHIBITED SECTION

DLRP 30N 161-30W CVS/DE OP SHIP

(SEE TABLES 6, 6A, 7, 46 AND FIGURES 6, 7, 44, FOR ADDITIONAL INFORMATION)

	INPUT							RESPONSE										
TIME	TGT BRNG FM DLRP	TGT RNGE FM DLRP	TGT COURSE	TGT SPEED	TGT DEPTH	UNIT (O.S)	SENSOR	TGT BRNG FM SENS	TGT RNGE FM SENS	O.S. COURSE	O.S. SPEED	TGT COURSE	TGT SPEED	TGT DEPTH	TIME C/C	TIME C/S	RPT SENT OPSHIP	RPT REC'D OPSHIP
142030	308	96	151	8.0	300	KOELSCH	SQS-26	330	9000	180	12							
	"	"	"	"	"	TOM	SQS-23	061	12000	180	12							
2115	305	99	338	8.0	300	KOELSCH	SQS-26											
	"	"	"	"	"	TOM	SQS-23											
2200	308	96	151	12.0	500	KOELSCH	SQS-26											
	"	"	"	"	"	TOM	SQS-23											
2300	310	93	330	12.0	500	KOELSCH	SQS-26											
	"	"	"	"	"	TOM	SQS-23											
2300	DROP																	
152300	850	65	250	5.0	400	WP	SB-WF	102										
2305	DROP																	
160001	852	68	050	7.0	100	WP	SB-WF	100		180	173							

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TITLE

DATE

PHASE II STOPPER COLD WAR NAVIGATION TRACK

141600-162000 PROHIBITED SECTION

DLRP 20N 161-30W

CVS/DE OpShip

TABLE 47

TIME	BRNG FM REF PT	RNGE FM REF PT	COURSE	SPEED	DIST	TIME	TGT	TGT BRNG	TGT RNGE
141600	151°	64	270°	8.0	64	8+00			
150000	225°	59	045°	8.0	160	24+00			
2000	045°	101	135°	4.0	3	0+45	PLUG	068°	6800
2045	047°	101	225°	8.0	3	0+22	PLUG	-	-
2107	047°	98	315°	12.0	3	0+15	PLUG	-	-
2122	045°	98	260°	13.0	26	2+00	PLUG	276°	22,300
2322	035°	79	116°	6.0	31	5+08	PLUG	276°	22,300
160403	055°	90	235°	6.0	30	5+00	-	-	-
160930	055°	60	180°	6.0	51	8+30	-	-	-
161800	109°	52	313°	7.0	14	2+00			
16200	100°	40	FINEX						

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TABLE 47A PHASE II COLD WAR STOPPER TARGET SHIP

OBSERVER'S DATA SHEET

141600-162000 PROHIBITED SECTION

DLRP 20N 161-30W CVS/DE OPSHIP

PLUG TRANSIT SHIP

(SEE TABLES 6, 9, 10, 18, 47, and FIGURES 8, 9, and 44

FOR ADDITIONAL INFORMATION)

	INPUT							RESPONSE										
TIME	TGT BRG FM DLRP	TGT RNGE FM DLRP	TGT COURSE	TGT SPEED	TGT DEPTH	UNIT (O.S.)	SENSOR	TGT BRNG FM SENS	TGT RNGE FM SENS	O.S. COURSE	O.S. SPEED	TGT COURSE	TGT SPEED	TGT DEPTH	TIME C/C	TIME C/C	RPT SENT OPSHIP	PRT SENT OPSHIP
151238	045	41	045	8.0	160	S2E	SB-XI	199		185	112							
1244	DROP																	
1408	045	54	045	8.0	200	S2E	SB-XI	062										
1444	DROP																	
2000	045	91	135	4.0	SNORKEL PLUG		B.Q-2	248	6800	260	13							
2122	045	98	260	13.0	SNORKEL PLUG/S2E		RADAR		111M	260	13							
2126	DROP																	

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DATA SHEET
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TITLE
PHASE II COLD WAR PURPLE A3 NAVIGATION TRACK

DATE
141600-162000 PROHIBITED SECTION

DLRP 20N 161-30W

CVS/DE OpShip

TABLE 48

TIME	BRNG FM REF PT	RNGE FM REF PT	ALT	CUS	SPD	DIST	TGT	TGT BRNG	TGT RNGE
142045	030°	360	3000	210°	360	240			
2125	030°	120	3000	210°	360	120	ASWGRU	209°	61
2145	000°	000	3000	135°	360	30	DROP	DROP	DROP
2150	135°	30	3000	085°	360	60	SAU A	087°	59
2200	101°	82	3000	000°	360	60	SAU A	000°	000
2210	062°	92	3000	000°	360	120	DROP	DROP	DROP
2240	DROP	DROP							

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CALCULATION SHEET

U. S. NAVY ELECTRONICS LABORATORY, SAN DIEGO, CALIF. 92152

TITLE TABLE 48A PHASE II COLD WAR A3 TARGET AIRCRAFT OBSERVER's DATA SHEET

DATA 141600 - 162000 PROHIBITED SECTION

WASP OP SHIP

(See Tables 6, 7, 49 and Figures 9, 45 for additional information)

INPUT								RESPONSE											
TIME	UNIT (O.S.)	TARGET TYPE	BRNG FM DLRP	RNG FM DLRP	TARGET COURSE	TARGET SPEED	TARGET ALTITUDE	O.S. COURSE	O.S. SPEED	TIME TGT DESIG	TGT BRNG	TGT RANGE	TGT COURSE	TGT SPEED	TGT ALT	TIME CPA	TIME A/C AB	TALLY HO	RPT SENT OP SHIP
142125	WASP	HISPDA/C	030	120	210	360	3000												
2145	DROP																		
2150	SAU A	HISPDA/C	135	30	085	360	3000												
2200	SAU A	HISPDA/C	101	82	000	360	3000												
2210	DROP																		

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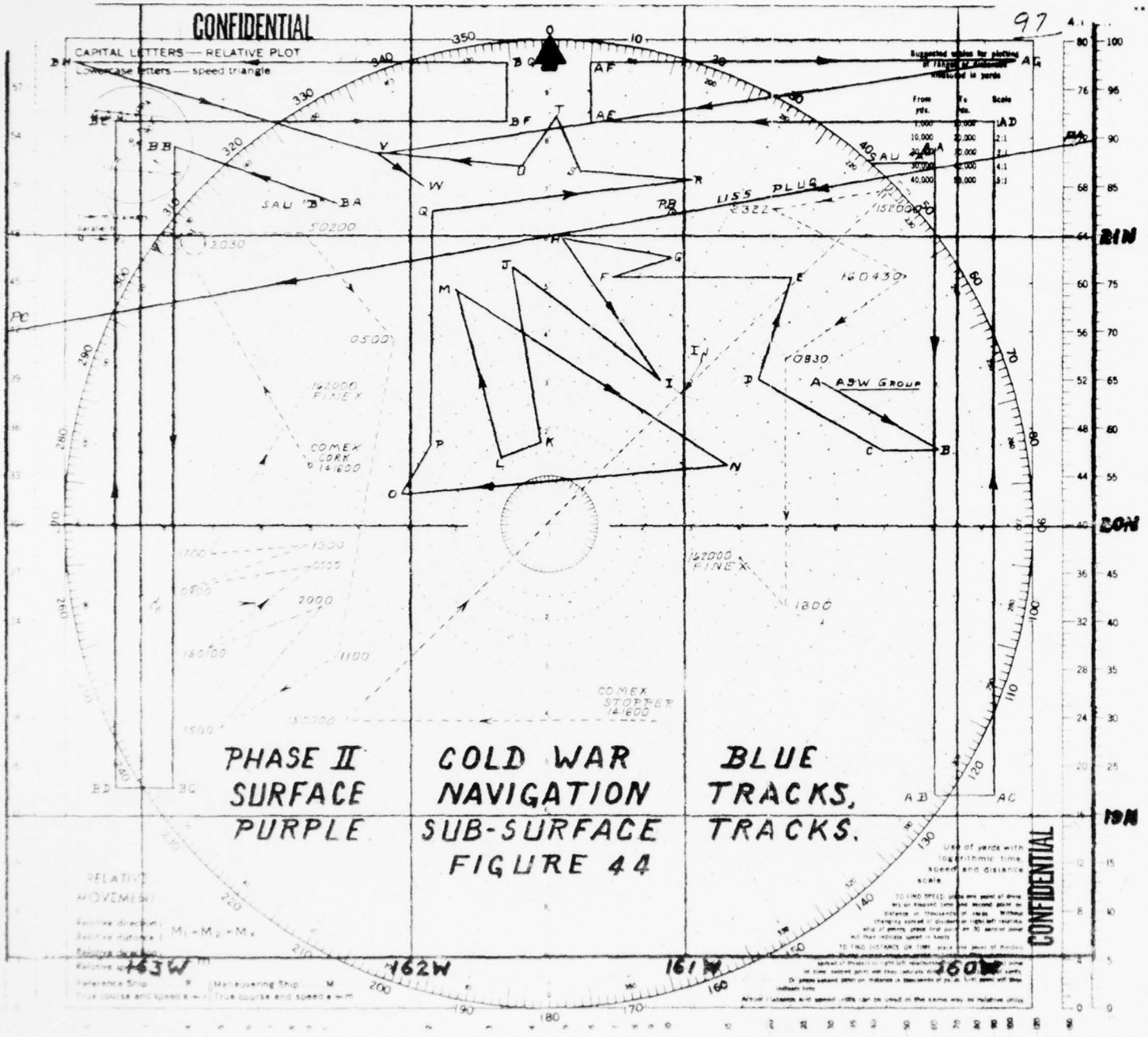

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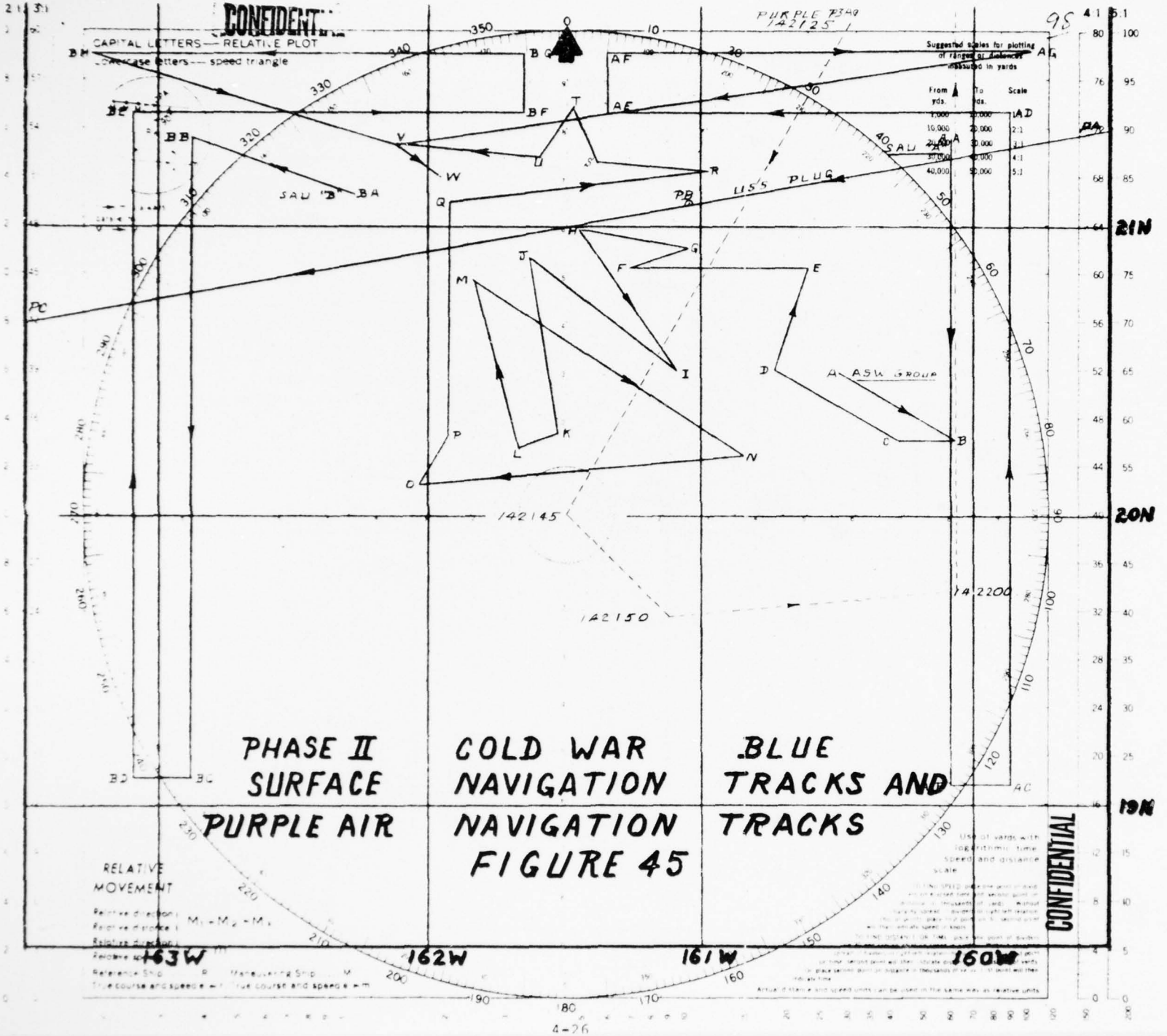

PHASE II COLD WAR BLUE
SURFACE NAVIGATION TRACKS AND
PURPLE AIR NAVIGATION TRACKS
FIGURE 45

4.6 PHASE II - HOT WAR. -

4.6.1 OBJECTIVE. Upon receipt of a formal declaration of war (162000), BLUE Forces will seek out and destory PURPLE submarines. At the same time PURPLE submarinas will open hostilities against BLUE forces, including torpedo and missile firings. Priority of targets is assigned as follows:

TORPEDOES		MISSILES
1	OILER	2
2	TROOP SHIPS	3
3	CARGO SHIPS	4
4	CVS	1
5	DD TYPES	5
6	TARGETS OF SPECIAL SIGNIFICANCE	6
X	AS DESIGNATED BY COMPURPLE	X

4.6.2 SAU ALPHA ATTACK AND ASW GROUP SCREEN PENETRATION. -

4.6.2.1 SURVEILLANCE BOGEY. At 170420 a PURPLE A3 surveillance aircraft approaches the operating area from the northeast. At 0500 SAU ALPHA is picked up on radar and visually sighted at 0505. A contact report is sent to CINCPURPLE. At 0510 the ASW Group is picked up on radar at 62 miles and a flash contact report is sent. The ASW Group is visually sighted at 0519, and reported by message to CINCPURPLE at 0522. At 0534 SAU BRAVO is picked up on radar and visually sighted and reported at 0545.

CINCPURPLE relays these contact reports to PURPLE submarines. The A3 navigation track is depicted in Table 54, 54A and Figure 47.

4.6.2.2 EXPECTED RESULTS. SAU ALPHA (DICK) should send via Aircraft Reporting Net #4 a position report on the approaching high speed aircraft bogey. The Operational Ship, via Link 11 and/or Link 14 should direct WASP to launch two A4's to intercept the bogey, and should direct one or more DLG/DD's to engage and destroy the bogey as it approaches the ASW Group. SAU BRAVO (KOELSCH) should report the bogey via Link 11 and Link 14, and should engage the bogey with ship's GFCS.

4.6.2.3 SAU ALPHA ATTACK. At 170140 STOPPER is picked up by Sonobuoy XG. At 0157 and 0257 Sonobuoy XG transmits to S2E-XE aircraft a target indication bearing 264T and 305T respectively. At 0515 STOPPER receives a message from CINCPURPLE that two destroyers are 35 miles to the north and proceeding easterly at 12 knots. STOPPER adjusts course and speed to intercept the destroyers. At 170800 STOPPER sights DICK bearing 050T and DICK makes sonar contact with STOPPER bearing 230T 7800 yards. At 0805 STOPPER sights HARRY bearing 310T and HARRY makes sonar Contact with STOPPER bearing 130T 7800 yards. At 0810 STOPPER fires two MK-16 torpedoes at DICK. DICK picks up the torpedoes at a range of 3400 yards. At 0840 STOPPER fires two MK-16 torpedoes at HARRY. HARRY picks up

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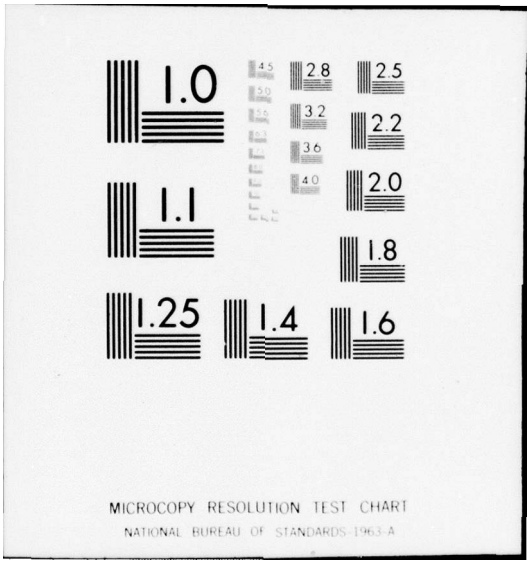
1.0
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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

the torpedoes at a range of 3700 yards. STOPPER escapes by making a zig-zag course to the west. The navigation tracks are depicted in Tables 52, 52A and Figure 46.

4.6.2.4 EXPECTED RESULTS. The S2E-XE is expected to send via Barrier Reporting Net #2 the sonobuoy emission contacts. The Operational Ship is expected to relay the information on the contact via Link 11 and Link 14, and may direct aircraft to localize the sonobuoy contact.

DICK and/or HARRY are expected to report the sonar contact via Submarine Reporting Net #5, engage the submarine with UBFCS, and fire ASW weapons at STOPPER. DICK and HARRY should attempt to evade the high speed torpedoes fired by STOPPER and launch a counter-attack.

4.6.2.5 SCREEN PENETRATION. At 170340 CORK is picked up by Sonobuoy ZA. At 0422 Sonobuoy ZA transmits to BLUE P3A patrol aircraft a target indication bearing 232T. At 0810, an ASW Group helicopter in Station 6135 picks up CORK on dipping sonar bearing 222T 15,200 yards. At 0815 an ASW Group destroyer in Station 3180 picks up CORK on SQS-23 sonar bearing 195T, 10,800 yards. CORK fires two MK-16 torpedoes at WASP at 4,000 yards. CORK escapes by following a zig-zag course to the north.

4.6.2.6 EXPECTED RESULTS. The BLUE P3A aircraft is expected to send via Barrier Reporting Net #2 the sonobuoy emission contact. The Operational Ship is expected to relay the information on the contact via Link 11 and Link 14, and may direct aircraft to localize the sonobuoy contact. Likewise the ASW Group helicopter is expected

to send via Barrier Reporting Net #2 the contact which the Operational Ship is also expected to relay via Link 11 and Link 14, plus directing aircraft and destroyer screen to localize and attack the goblin. When the two high speed torpedoes are fired at WASP, WASP should attempt to evade the torpedoes.

4.6.3 POCOHANTAS STOPPER INCIDENT. -

4.6.3.1 SURVEILLANCE BOGEY. At 0438 a PURPLE surveillance aircraft approaches the operating area from the northeast and at 0459 picks up a radar contact of a large group of ships at 80 miles. At 0459 WASP air search radar picks up the bogey bearing 038T 80 miles, course 220K, speed 360K, altitude 3500 feet. At 0508 the A3 visually sights the ASW Group bearing 230T, range 24 miles, course 135 speed 12. The A3 sends a contact report to COMPURPLE and PURPLE submarines. The A3 navigation track is depicted in Table 54 and Figure 47.

4.6.3.2 POCOHANTAS ATTACK. At 180515 STOPPER receives the contact report and turns to course 180T speed 15K to intercept BLUE force. At 0645 STOPPER sights the BLUE ASW Group bearing 208T 24NM. WASP has completed fueling from POCOHANTAS and is turning south at 20 knots to launch aircraft. The possibility of a successful attack on WASP is remote. However, POCOHANTAS is turning port to course 030T speed 12K. Although POCOHANTAS appears well screened by two destroyers, STOPPER maneuvers on the port bow of DICK to attack. At 0715 DICK makes sonar contact with the goblin bearing 026T 18,700 yards. At 0744 STOPPER fires two MK-16 torpedoes at POCOHANTAS at 4,200 yards. STOPPER escapes by diving below the layer, and running on the opposite course of POCOHANTAS at 12 knots. The navigation

track of STOPPER is depicted in Table 52 and Figure 46.

4.6.3.3 EXPECTED RESULTS. The Operational Ship, via Link 11 and/or Link 14 should direct WASP to launch two A4 aircraft to intercept the bogey, and should direct one or more destroyers to engage the bogey with GFCS.

DICK is expected to engage the submarine, attack the target with an ASW weapon, and report the contact via voice circuit Submarine Reporting Net #5. When the two torpedoes are fired at POCOHANTAS, DICK is expected to alert POCOHANTAS and advise of a safe course to be steered.

4.6.4 MISSILE INCIDENT. -

4.6.4.1 SURVEILLANCE BOGEY. At 191202 a PURPLE A3 transiting aircraft enters the operating area from the southwest and at 1216 picks up a radar contact indicating a large group of ships bearing 025T 118 miles. At the same time WASP picks up the bogey bearing 205T 118 miles, course 030T speed 360K, altitude 24,000 feet. At 1231 the aircraft sights the BLUE ASW Group bearing 012T range 26 miles, course 208T, speed 13K. The A3 sends a contact report to COMPURPLE and PURPLE submarines. The A3 navigation track is depicted in Table 54 and Figure 47.

4.6.4.2 ELECTRONIC FIX. At 191237 STOPPER receives the contact report. STOPPER realizes the distance and disposition of the ASW Group makes the chances of a successful torpedo attack remote. However, at 1310 STOPPER holds an electronic emission bearing 325T. At 1312 CORK also holds an electronic emission bearing 073T. Hump frequency analysis of the electronic emissions indicate the ship to

be a BLUE aircraft carrier and probably the same carrier reported by the A3. The target's range from STOPPER is estimated at 74 miles, course 208T, and speed 13K. At 1320 STOPPER fires an initial salvo of two cruise missiles at WASP which are picked up by WASP's air search radar bearing 156T 74 miles, course 326T, speed 800K, altitude 2000 feet. At 1323 STOPPER fires a second salvo of two cruise missiles. The second salvo is picked up by WASP and JOHNSON at 1323 bearing 156T 74 miles, course 326T speed 800K, altitude 1500 feet. At 1333 STOPPER dives deep and escapes to the south at slow speed.

4.6.4.3 EXPECTED RESULTS. WASP should report the bogey via Link 11 and Link 14 Data Message, and launch two A4 aircraft to engage the contact. The Operational ship will probably direct by Link 11 and/or Link 14 one or more DDs to engage the contact.

WASP should report the approach of the cruise missiles via Link 11 and Link 14 Data Message. On receipt of the Data Message, JOHNSON should engage the missiles with TERRIER missile system, and the Operational Ship should direct JOHNSON to engage the missile and one or more S2E aircraft to seek out and destroy STOPPER.

4.6.5 FINEX. At 191715 COMPURPLE signals FINEX.

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TITLE

PHASE II HOT WAR CORK NAVIGATION TRACK

DATE

162000 - 191715 PROHIBITED SECTION

DLRP 20N 161-30W

CVS/DE OpShip

TABLE 51

TIME	BRNG FM REF PT	RNGE FM REF PT	COURSE	SPEED	DIST	TGT	TGT BRNG	TGT RNGE (YARD)	REMARKS
162000	299°	57	120°	10.8	83				
170340	133°	27	120°	10.8	14	SB-ZA	075°	-	INT TGT
0510	130°	40	000°	10.8	22	SB-ZA	000°	-	
0710	098°	31	000°	12	12	SB-ZA	180°	-	DROP TGT
0810	078°	32	000°	12	1	H-3	042°	15,200	-
0815	075°	32	000°	12	3	Johnson	075°	10,800	
0830	070°	33	090°	15	1	WASP	070°	5,700	-
0834	071°	34	090°	20	6	WASP	088°	4,000	2-HISPTORP
0852	069°	43	300°	20	11	WASP	224°	10,000	DROP TGT
0925	056°	38	032°	20	13				
1004	050°	50	310°	20	17				
1055	030°	50	274°	20	22				
1100	005°	45	185°	8.5	85				
180900	005°	20	313°	7.0	98				
2300	290°	80	062°	9.0	36				
190300	315°	62	135°	7.0	42				
0900	315°	20	045°	10.0	1				
0906	320°	20	320°	14.6	1.0				
1312	320°	80	320°	15.0	12	WASP	073	-	
1400	320°	89	210°	10.0	3				
191715	FINEX								

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TITLE TABLE 51A PHASE II HOT WAR CORK TARGET SHIP MK-16 MOD 6 TORPEDO OBSERVER'S DATA SHEET

AUTH 162000-191715 PROHIBITED SECTION

DLRP 20N 161-30W CVS/DE OPSHIP

(See Tables 9, 11, 13, 51 and Figures 8, 9, 46 for additional information)

INPUT									RESPONSE									
TIME	TGT	TGT BRNG FM DLRP	TGT RNGE FM DLRP	TGT COURSE	TGT SPEED	TGT DEPTH	UNIT (O.S.)	SENSOR	TGT BRNG FM SENSR	TGT RNGE FM SENSR	O.S. COURSE	O.S. SPEED	TGT COURSE	TGT DEPTH	TIME C/C	TIME	RPT SENT RA REC	
170422	CORK	131	32	120	10.8	300	VP	SE-ZA	232		270	172						
0426	DROP																	
170810	CORK	078	32	000	12	300	H-3	SONAR	222	15,200	155	12						
0815	CORK	075	32	000	12	200	DICK	SONAR	195	10,800								
0830	CORK	070	33	090	15	200	WASP	SONAR	070	5,700								
0834	2 MK-16	071	34	090	46	32	WASP	SONAR	260	4,000								

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TABLE 51A PHASE II HOT WAR CORK TARGET SHIP MK-16 MOD 6 TORPEDO OBSERVER'S DATA SHEET

162000-491715 PROHIBITED SECTION

DLRP 20N 161-30W CVS/DE OPSHIP

(See Tables 9, 11, 13, 51 and Figures 8, 9, 46 for additional information)

INPUT								RESPONSE										
TIME	TGT	TGT BRNG FM DLRP	TGT RNGE FM DLRP	TGT COURSE	TGT SPEED	TGT DEPTH	UNIT (O.S.)	SENSOR	TGT BRNG FM SENSR	TGT RNGE FM SENSR	O.S. COURSE	O.S. SPEED	TGT COURSE	TGT DEPTH	TIME C/C	TIME [illegible]	RPT SENT	RA REC
170422	CORK	131	32	120	10.8	300	VP	SB-ZA	232		270	172						
0426	DROP																	
170810	CORK	078	32	000	12	300	H-3	SONAR	222	15,200	155	12						
0815	CORK	075	32	000	12	200	DICK	SONAR	195	10,800								
0830	CORK	070	33	090	15	200	WASP	SONAR	070	5,700								
0834	2 MK-16	071	34	090	46	32	WASP	SONAR	260	4,000								

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TITLE

PHASE II HOT WAR STOPPER NAVIGATION TRACK

DATE

162000 - 191715 PROHIBITED SECTION

DLRP 20N 161-30W

CVS/DE OpShip

TABLE 52

TIME	BRNG FM REF PT	RNGE FM REF PT	COURSE	SPEED	DIST	TGT	TGT BRNG	TGT RNGE (YARDS)	REMARKS
16200	100°	40	037°	8.2	46				
170140	067°	72	037°	8.2	16	SB-XG	084°	-	INIT TGT
170337	062°	87	037°	8.2	36	SB-XG	125°	-	DROP TGT
0800	054°	122	037°	12.0	1	DICK	050°	7800	
0800	054°	122	037°	12.0	1	HARRY	310°	7800	
0805	054°	123	090°	12.0	1	DICK	070°	5900	
0810	055°	123	220°	12.0	3	DICK	089°	3400	2-HISPTORP
0825	055°	120	220°	12.0	3	HARRY	258°	6300	DROP DICK
0840	055°	117	315°	12.0	1	HARRY	220°	3700	2-HISPTORP
0845	055°	117	315°	8.0	4	HARRY		-	DROP HARRY
0915	053°	116	225°	8.0	6				
1000	053°	110	315°	8.0	6				
1100	050°	109	225°	6.0	6				
1200	050°	104	315°	6.0	6				
1300	047°	104	225°	6.0	6				
1400	047°	99	315°	6.0	24				
1800	033°	99	233°	6.5	13				
2000	030°	88	086°	5.5	51				
180515	050°	123	180°	19	30				
0715	066°	103	215°	8	4	DICK	206°	18,700	INIT TGT
0715	066°	103	215°	8	4	POCOH	218°	23,000	

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PHASE II HOT WAR STOPPER NAVIGATION TRACK

DATE
162000 - 191715 PROHIBITED SECTION

DLRP 20N 161-30W

CVS/DE OpShip

TABLE 52

TIME	BRNG FM REF PT	RNGE FM REF PT	COURSE	SPEED	DIST	TGT	TGT BRNG	TGT RNGE (YARDS)	REMARKS
0744	066°	100	217°	10	1	DICK	280°	2000	
0747	066°	100	217°	10	21	POCOH	247°	4200	2-HISPTROP
						POCOH	-	-	DROP
1000	074°	82	177°	6	72				
2200	126°	96	346°	5.4	75				
191200	070°	68	250°	6.0	7				
1310	070°	60	250°	6.0	1	WASP	326°		
1320	070°	59	250°	6.0	1/3	WASP	326°	73	2-SSM
1323	070°	59	168°	8.0	31	WASP	326°	73	2-SSM
1715	FINEX								FINEX

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TITLE TABLE 52A PHASE II HOT WAR STOPPER TARGET SHIP MK-16 MOD 6 TORPEDO OBSERVER'S DATA SHEET

DATA 162000-191715 PHROHIBITED SECTION

DLRP 20N 161-30W CVS/DE OPSHIP

(See Table 7, 9, 10, 13, 14, 52 and Figures 8, 9, 46 for additional information)

	INPUT								RESPONSE										
TIME	TGT	TGT BRNG FM DLRP	TGT RNGE FM DLRP	TGT COURSE	TGT SPEED	TGT DEPTH	UNIT (O.S.)	SENSOR	TGTBRNG FM SENS	TGTRNGE FM SENS	O.S. COURSE	O.S. SPEED	TGT COURSE	TGT DEPTH	TIME C/C	TIME C/S	CTR ATK	RPT SENT OPSHIP	RPT RCD OPSHIP
170157	STOPPER	066	74	037	8.2	200	S2E-1	SB-XG	264		225	132							
0203	DROP																		
170257	STOPPER	063	82	037	8.2	200	S2E-1	SB-XG	305		225	132							
0303	DROP																		
170800	STOPPER	054	122	037	12.0	200	DICK	SONAR	230	7800									
0800	STOPPER	054	122	037	12.0	P	HAREY	SONAR	130	7800									
0805	STOPPER	054	123	090	12.0	P	DICK	SONAR	250	5900									
0810	2 MK-16	055	123	089	46.2	20	DICK	SONAR	269	3400									
0813	DROP																		
0825	STOPPER	055	120	220	12.0	PERIS	HARRY	SONAR	078	6300									
0840	2 MK-16	055	117	220	46.2	20	HARRY	SONAR	040	3700									
0843	DROP																		
180725	STOPPER	066	103	215	8.0	P	DICK	SONAR	026	18,700									
0744	STOPPER	066	100	217	10.0	P	DICK	SONAR	260	2,000									
0744	2 MK-16	066	100	217	10.0	P	POCOH	SONAR (HARRY)	247	4,200									
0747	DROP																		

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TITLE: TABLE 53 PHASE II HOT WAR STOPPER/CORK MISSILE ATTACK OBSERVER'S DATA SHEET

DATA: 162000-191715 PROHIBITED SECTION

DLRP 20N 161-30W CVS, DE OPSHIP

(SEE TABLES 10, 13, 51, 52, and Figures 9, 46 FOR ADDITIONAL INFORMATION

	INPUT							RESPONSE										
TIME	TARGET	TGT BRNG FM DLRP	TGT RNGE FM DLRP	TGT COURSE	TGT SPEED	TGT ALT/ DEPTH	UNIT (O.S)	SENSOR	TGT BRNG FM SENS	TGT RNGE FM SENS	O.S. COURSE	O.S. SPEED	TGT COURSE	TGT DEPTH	TIME C/C	TIME C/S	TIME CTR ATR	RPT SENT OP SHIP	RPT REC OP SHIP
191300	STOPPER	070	59	250	6	SURF	S2E	RADAR	010	13	345	12							
1305	DROP					(DIVE)	DROP												
1310	STOPPER	070	60	250	6	SURF	WASP	EL. EM	146		208	13							
1320	2 SAM	059	59	326	800	2000	WASP	RADAR	156	74									
1323	2 SAM	059	59	326	800	1500	WASP	RADAR	156	74									
"	"	"	"	"	"	"	"	JOHNSON	RADAR	"	"									
1333	DROP																		
191312	CORK	320	80	320	15	SURF	WASP	ELEM	253	-	208	13							

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TITLE
PHASE II HOT WAR PURPLE A3 NAVIGATION TRACK

DATE
162000 - 191715 PROHIBITED SECTION

DLRP 20N 161-30W

CVS/DE OpShip

TABLE 54

TIME	BRNG FM REF PT	RNGE FM REF PT	ALT	CUS	SPD	DIST	TGT	TGT BRNG	TGT RNGE
170420	025°	355	3000	205°	360	240			
0500	025°	115	3000	123°	360	30	SAU A	123°	36
0505	040°	115	3000	220°	360	30	SAU A	120°	6
0510	040°	85	3000	220°	360	85	DROP	DROP	DROP
0510	040°	85	3000	220°	360	55	ASWGRU	213°	62
0519	040°	30	3000	220°	360	30	ASWGRU	168°	8
0524	000°	0	3000	335°	360	60	DROP	DROP	DROP
0534	335°	60	3000	335°	360	6	SAU B	288°	60
0535	335°	66	3000	281°	360	59	SAU B	282°	56
0545	312°	104	3000	030°	360	60	SAU B	285°	7
0555	DROP	DROP	DROP	DROP	DROP	DROP	DROP	DROP	DROP
180438	044°	280	3500	220°	360	126			
0459	047°	155	3500	220°	360	54	ASWGRU	218°	80
0508	050°	100	3500	000°	360	240	ASWGRU	202°	15
0548	DROP	DROP	DROP	DROP	DROP	DROP	DROP	DROP	DROP
191202	219°	115	24000	030°	360	83	ASWGRU		
1216	243°	36	24000	030°	360	96	ASWGRU	205°	118
1231	011°	64	24000	030°	360	16	ASWGRU	012°	26
1236	017°	93	24000	000°	360	240	ASWGRU	258°	9
1314	DROP	DROP	DROP	DROP	DROP	DROP			

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TITLE TABLE 54A PHASE II HOT WAR A3 TARGET AIRCRAFT OBSERVER'S DATA SHEET

P 162000-191715 PROHIBITED SECTION

CVS/DE OP SHIP

(SEE TABLES 13, 14, 15, and FIGURES 9, 47 FOR ADDITIONAL INFORMATION)

	INPUT							RESPONSE										
TIME	UNIT (O.S.)	TARGET TYPE	BRNG FM DLRP	RNGE FM DLRP	TARGET COURSE	TARGET SPEED	TARGET ALTITUDE	O.S. COURSE	O.S. SPEED	TIME TGT DESIGN	TARGET BRNG	TARGET RANGE	TARGET COURSE	TARGET SPEED	TARGET ALTITUDE	TIME CPA	TIME A/C A.B.	TALLYHO	RPT SENT OP SHIP
170500	SAU A	HISPD A/C	025	115	123	360	3000	090	12										
0505	SAU A	HISPD A/C	040	115	220	360	3000												
0510	DROP																		
0510	WASP	HISPD A/C	040	85	220	360	3000	010	12										
0519	WASP	HISPD A/C	040	30	220	360	3000												
0524	DROP																		
0534	SAU B	HISPD A/C	335	60	335	360	3000	135	12										
0535	SAU B	HISPD A/C	335	66	281	360	3000												
0545	SAU B	HISPD A/C	312	104	030	360	3000												
0555	DROP	-																	
180459	WASP	HISPD A/C	047	155	220	360	3500	135	12										
0508	WASP	HISPD A/C	050	100	000	360	3500												
0548	DROP																		
121202	WASP	HISPD A/C	222	100	030	360	24000	208	13										
1016	WASP	HISPD A/C	260	25	030	360	24000												
1231	DROP																		
																		CONFIDENTIAL	

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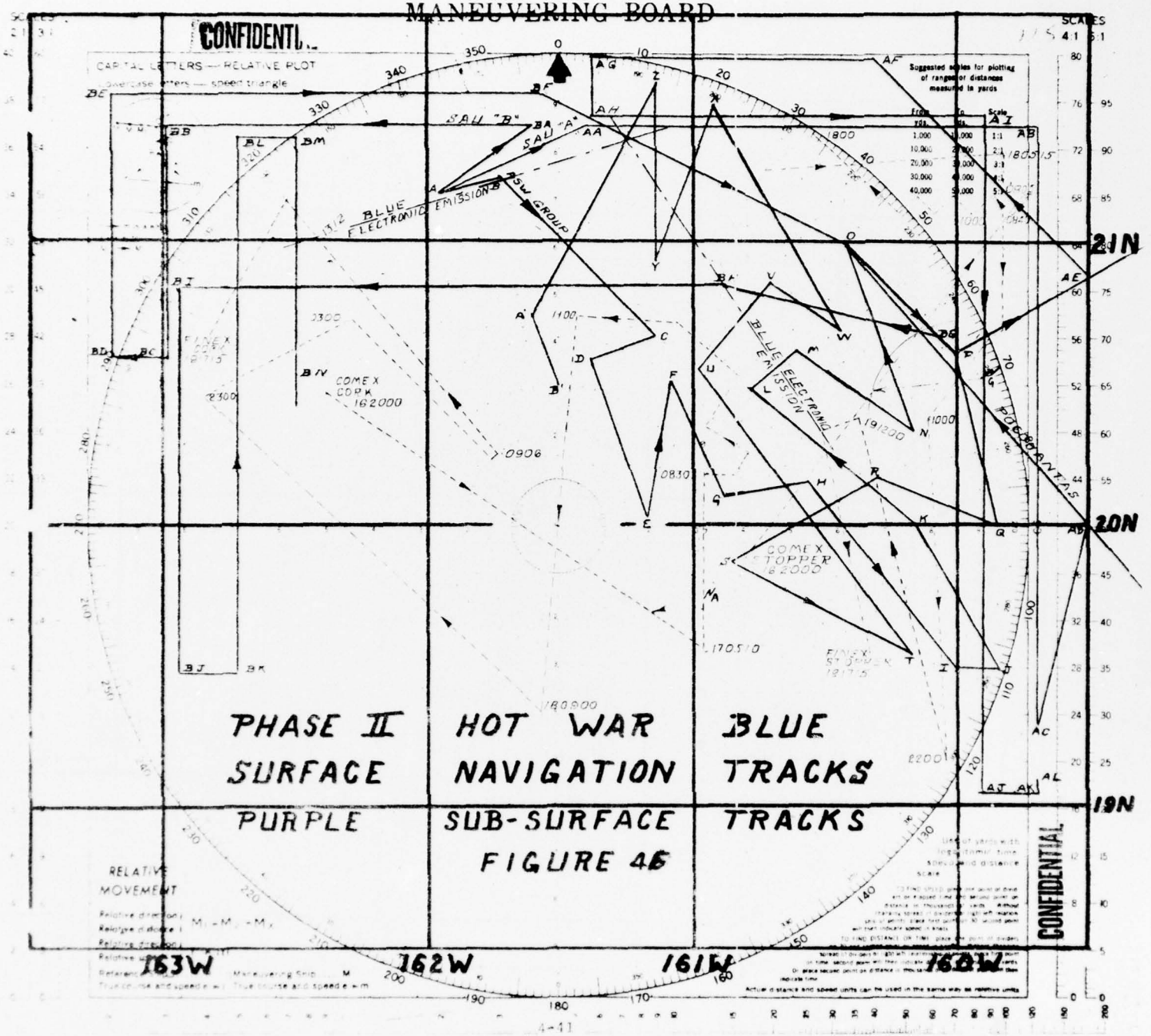

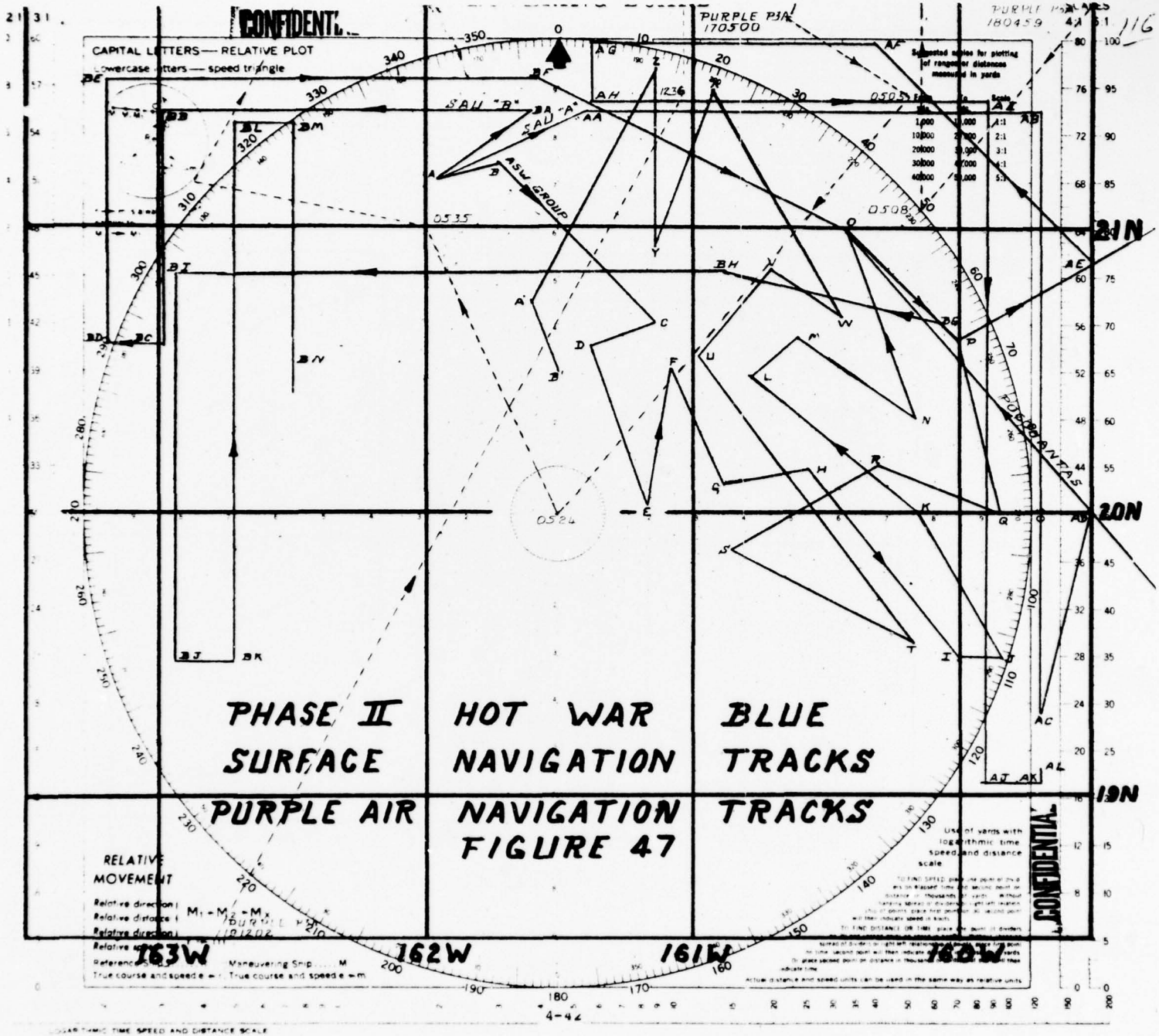
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CAPITAL LETTERS — RELATIVE PLOT
Lowercase letters — speed triangle
PURPLE P3A
170500
PURPLE P3A
180459
SAU "B"
SAU "A"
ASW GROUP
0535
0508
0524
21N
20N
19N
163W
162W
161W
160W
PHASE II
SURFACE
HOT WAR
NAVIGATION
BLUE
TRACKS
PURPLE AIR
NAVIGATION
TRACKS
FIGURE 47
RELATIVE
MOVEMENT
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4.7 PHASE III WEAPONS DELIVERY (200000 - 220000). -

4.7.1 OBJECTIVE. The Objective of PHASE III is to provide opportunities for BLUE forces to conduct ASW weapons attacks on PURPLE forces. A secondary objective is to exercise the air and surface defense system. In pursuit of this objective PURPLE submarines will force contact at ranges varying from less than 5,000 yards to greater than 16,000 yards. This will provide the BLUE ASW Group with an opportunity to use all assigned ASW weapons at least once. Additionally, at least one PURPLE High Performance Air and Surface Vehicle will approach the BLUE ASW Group to provide an opportunity for BLUE force to use non-ASW weapons.

4.7.2 OPERATING AREA. The operating area will be within, 125 NM of the Data Link Reference Point (DLRP) 20N 161-30W.

4.7.3 NAVIGATION TRACKS. The navigation tracks of CORK, STOPPER, SWIFT and A3 aircraft are depicted in Tables 55, 56, 57, 58 and 59, and Figures 48, 49 and 50 respectively.

4.7.4 COORDINATED ATTACKS. -

4.7.4.1 SUBMARINE ATTACK. At 200140 the Fast Submarine CORK is picked up by VOGE's SQS-26 sonar bearing 170T 14,400 yards at a depth of 200 feet. Four minutes later at 0144 the Slow Submarine STOPPER is picked up by VOGE's sonar bearing 107T 4,400 yards at periscope depth.

4.7.4.2 EXPECTED RESULTS. It is expected that VOGE will pass information on the contacts via Link 11 Data Message to Command and Control (C&CS) equipped ships, and via Link 14 to the remainder of the ASW Group. Upon receipt of the message the Operational Ship should send a Link 11 Control Message directing VOGE to engage the submarines. Additionally, it is expected that VOGE will launch an ASROC torpedo at CORK, and a MK 46 Mod 0 torpedo at STOPPER. After the torpedoes are launched, VOGE should report the results to BLUE units via Link 11 and Link 14.

4.7.4.3 SUB-AIR ATTACK. At 201140 the High Performance Air Vehicle (HPAV) A3 is picked up by JOHNSON's SPS-48 air search radar bearing 057T 122 NM, course 240T, speed 360K, altitude 3,000 feet. Twenty minutes later at 1200 CORK and STOPPER are picked up by KOELSCH's SQS-26 sonar. CORK bears 318T 21,000 yards at a depth of 600 feet. STOPPER bears 343T 7,800 yards 400 feet depth.

4.7.4.4 EXPECTED RESULTS. JOHNSON should inform the ASW Group of the HPAV's position and track via Link 11 and Link 14 Data Message. At the same time JOHNSON should engage the bogey with TERRIER surface-to-air missiles. The Operational Ship should send a Link 11 Control Message to JOHNSON and WASP. WASP may launch two A4 interceptors. Results of the TERRIER missile firings should be reported to the ASW Group by JOHNSON via Link 11 and Link 14.

WASP should report the air intercept results by Link 11 and Link 14.

The Operational Ship should inform C&CS equipped ships of the submarine contacts by Link 11 Data Message, and the other BLUE ships by Link 14. KOELSCH should engage the submarines and launch a Drone Antisubmarine Helicopter (DASH) at CORK and a MK 37 Mod 1 torpedo at STOPPER. Results of DASH and the torpedo run should be reported by Link 11 and Link 14.

4.7.4.5 SURFACE-SUB-AIR ATTACK. At 210930 SWIFT, a High Performance Surface Vehicle (HPSV), is picked up by KOELSCH's SPS-10 surface search radar bearing 301T 29 miles, course 108T speed 50 knots. At 210940 a High Performance Air Vehicle (HPAV) is picked up by JOHNSON's SPS-48 air search radar bearing 012T 148 miles, course 193T speed 360 knots. At 211000 the Fast Submarine CORK is picked up by VDGE's SQS-26 sonar bearing 142T 10,000 yards, course 000T speed 14 knots. At the same time the Slow Submarine STOPPER is picked up by KOELSCH's SQS-26 sonar bearing 340T 10,000 yards, course 160T speed 6 knots.

4.7.4.6 EXPECTED RESULTS. The Operational Ship should inform C&CS equipped ships by Link 11, and the remainder of the ASW Group by Link 14, of the position and track of the HPSV SWIFT. KOELSCH should engage the HPSV with own MK-37 Gun Fire Control System, and open fire when guns are locked on the target. Results should be passed by Link 11 and Link 14.

JOHNSON should inform the ASW Group of the approaching HPAV A3 via Link 11/14, and should engage the bogey with TERRIER Missile Tracking System. Upon receipt of the message the Operational Ship should send a Link 11 Control Message to JOHNSON and WASP. JOHNSON will probably launch TERRIER missiles at the bogey, and WASP A4 interceptors. Results of the missile firing should be reported by JOHNSON by Link 11 and 14. Interceptor results should be reported by WASP over Link 11 and Link 14.

VOGE should inform C&CS equipped ships of the Fast Submarine CORK contact by Link 11 Data Message, and the other ships in the ASW Group by Link 14. The Operational Ship should send a Link 11 Control Message to VOGE. VOGE should engage the submarine and launch an ASROC depth charge at CORK. Water entry point of ASROC and depth charge results should be reported by VOGE over Link 11 and Link 14.

KOELSCH should inform C&CS equipped ships of the Slow Submarine STOPPER contact by Link 11 Data Message, and the other ships by Link 14. KOELSCH should engage the submarine and launch an ASROC depth charge at STOPPER. Water entry point of ASROC and depth charge results should be passed by KOELSCH to C&CS equipped ships and the ASW Group by Link 11 and Link 14 respectively.

4.8 FINEX. FINEX is signaled at 220000.

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11ND-NEL-5220/1 (REV. 9-64)

U. S. NAVY ELECTRONICS LABORATORY
SAN DIEGO, CALIFORNIA 92152

TITLE
PHASE III WEAPONS DELIVERY CORK (FAST SUB) NAVIGATION TRACK

DATE
200000 - 220000

DLRP 20N 161-30W

CVS/DE OpShip

TABLE 55

POINT	TIME	BRNG FM DLRP	RNGE FM DLRP	COURSE	SPEED	DIST	TGT	TGT BRNG	TGT RNGE (YARDS)
CA	200000	030	37	328	22	29			
CB	0140	004	57	328	22	1	VOGE	350	14400
CC	0143	003	58	270	22	6	VOGE	352	10300
CD	0200	357	58	270	14	12	DROP		
CE	0513	320	75	180	14	72			
CF	1022	253	50	090	14	22			
CG	1200	240	30	135	12	6	KOELSCH	138	21000
CH	1230	230	25	108	12	6	DROP		
CI	0100	216	24	108	6	48			
CJ	1900	137	46	045	10	79			
CK	210254	075	90	214	16	104			
CL	0924	155	70	335	15	9			
CM	1000	155	61	000	14	10	VOGE	122	10000
CN	1100	148	49	034	9	117	DROP		
CO	220000	058	108	FINEX					

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TITLE
PHASE III WEAPONS DELIVERY STOPPER (SLOW SUB) NAVIGATION TRACK

DATE
200000 - 220000

DLRP 20N 161-30W

CVS/DE OpShip

TABLE 56

POINT	TIME	BRNG FM DLRP	RNGE FM DLRP	COURSE	SPEED	DIST	TGT	TGT BRNG	TGT RNGE (YARDS)
SA	200000	016	57	300	8.0	14.0			
SB	0144	004	61	300	8.0	1.0	VOGE	287	4400
SC	0151	003	62	200	8.0	3.0	VOGE	217	4400
SD	0214	002	59	200	9.0	78.0	DROP		
SE	1051	240	28	135	6.5	7.5			
SF	1200	225	27	080	8.0	6.0	KOELSCH	163	7800
SG	1245	216	22	080	8.0	36.0	DROP		
SH	1715	130	20	056	5.0	36.3			
SI	210030	215	46	215	6.0	54.0			
SJ	0930	158	40	160	13.0	6.5			
SK	1000	158	47	160	6.0	6.0	KOELSCH	160	10,000
SL	1100	158	53	279	6.0	78.0	DROP		
SM	220000	237	69	FINEX					

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U. S. NAVY ELECTRONICS LABORATORY

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TITLE

PHASE III WEAPONS DELIVERY USS SWIFT (H.P.S. Veh) NAVIGATION TRACK

DATE

200000 - 220000

DLRP 20N 161-30W

CVS/DE OpShip

TABLE 57

POINT	TIME	BRNG FM DLRP	RNGE FM DLRP	COURSE	SPEED	DIST	TGT	TGT BRNG	TGT RNGE NM
BA	210800	258	80	108	50	75			
BB	0930	188	40	108	50	25	KOELSCH	121	29
BC	1000	160	50	180	50	5	KOELSCH	110	2
BD	1012	162	55	DROP					

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TITLE

PHASE III WEAPONS DELIVERY A3 (HIGH SPEED A/C) NAVIGATION TRACK

DATE

200000 - 220000

DLRP 20N 161-30W

CVS/DE OpShip

TABLE 58

POINT	TIME	BRNG FM DLRP	RNGE FM DLRP	COURSE	SPEED	DIST	TGT	TGT BRNG	TGT RNGE
PA	201140	067	96	240	360	120	TOHNSON	237	122
PB	1200	DROP	TRACK						
PG	210940	029	105	193	360	148			
PH	1005	155	50	DROP					

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NAVELEX-3960/17 (REV. 12-63)

CALCULATION SHEET

U. S. NAVY ELECTRONICS LABORATORY, SAN DIEGO, CALIF. 92152

TITLE: PHASE III WEAPONS DELIVERY PURPLE AIR, SURFACE, AND SUB-SURFACE TARGETS OBSERVER'S DATA SHEET

DATA: 200000-220000 DLRP 20N 161-30W

CUS/DE - OPSHIP WASP FORM CENTER

FOR FURTHER INFO SEE TABLES 31, 55, 56, 57, 58 and FIGURES 48, 49, 50.

TABLE 59

INPUT								RESPONSE											
TIME	TARGET SHIP	TGT BRNG RNGE FM DLRP	TARGET COURSE SPEED	TARGET DEPTH/ ALTITUDE	WIND DIRECTION VELOCITY	UNIT (OWN SHIP)	UNIT SENSOR	O.C BRNG RNGE FM DLRP	O.S. COURSE SPEED	TGT BRNG RNGE FM SENSOR	TARGET COURSE SPEED	TIME O.S. C/C	TYPE C/S WPN	TIME WPN ASSND	TIME WPN ENGAGED	TIME WPN FIRED	TIME TO REACH TARGET	WPN COURSE SPEED	WPN ENTRY POINT
200140	CORK	004-57	328-22	200-D	135-12	VOGE	SQS-26	000-65	180-15										
0143	CORK	003-58	270-22	200-D	135-12	VOGE	SQS-26												
0200	DROP	→	→	→	→	→	→												
200144	STOPPER	004-61	300-08	PRSC-D	135-12	VOGE	SQS-26	000-64	180-15										
0151	STOPPER	003-62	200-08	PRSC-D	135-12	VOGE	SQS-26												
0214	DROP	→	→	→	→	→	→												
201140	A3	067-96	240-360	3000A	120-13	JOHNSON	SPS-48	212-32	000-15										
1200	DROP																		
201200	CORK	240-30	135-12	600D	120-13	KOELSCH	SQS-26	220-30	100-15										
1230	DROP	→	→	→	→	→	→												
201200	STOPPER	205-27	080-8	PRSC-D	120-13	KOELSCH	SQS-26	220-30	100-15										
1245	DROP	→	→	→	→	→	→												

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SHEET ___ OF ___ SHEETS

PHASE III WEAPONS DELIVERY PURPLE AIR, SURFACE, SUB-SURFACE TARGETS OBSERVER'S DATA SHEET

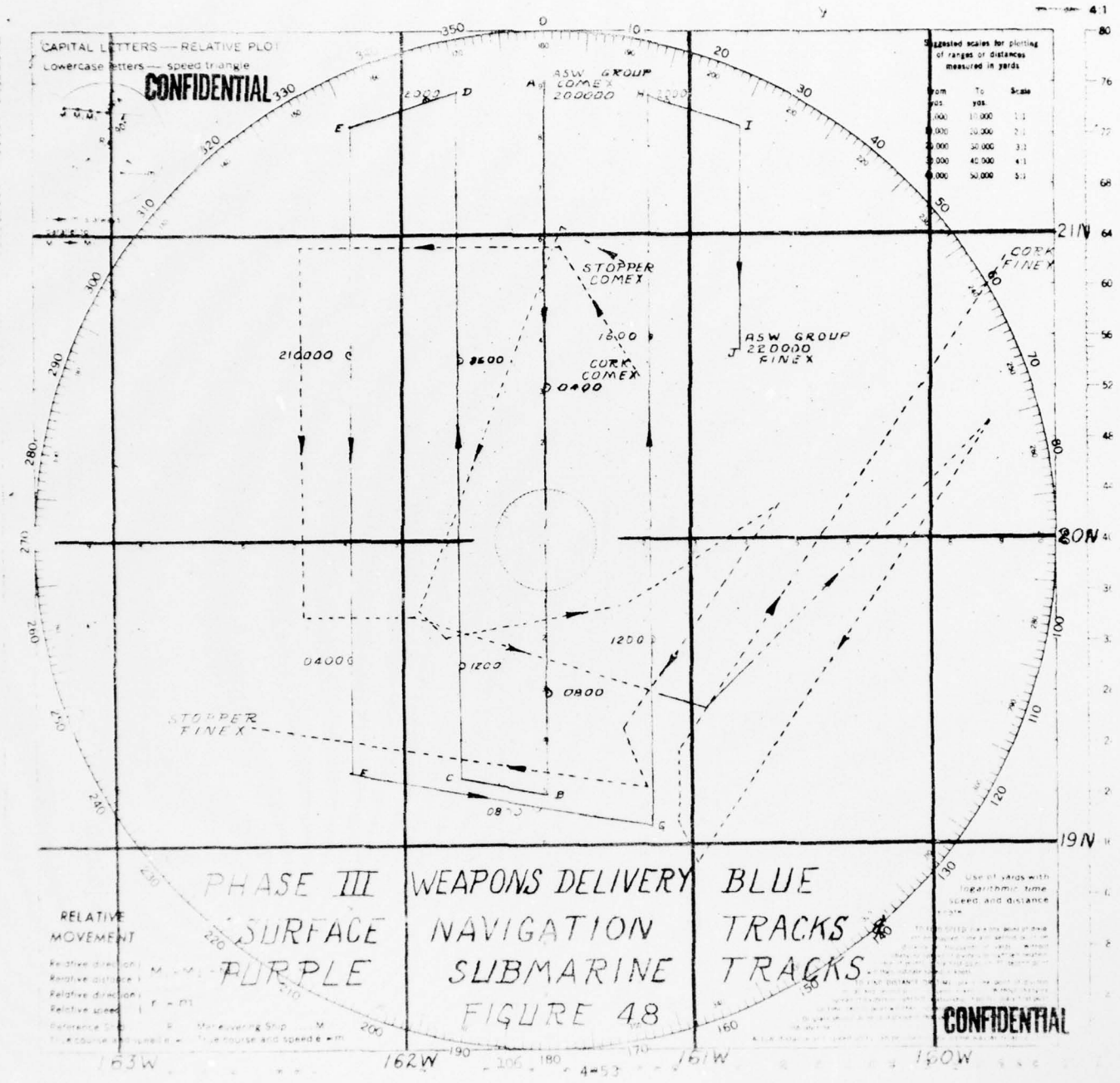
200000-220000 DLRP 20N 161-30W

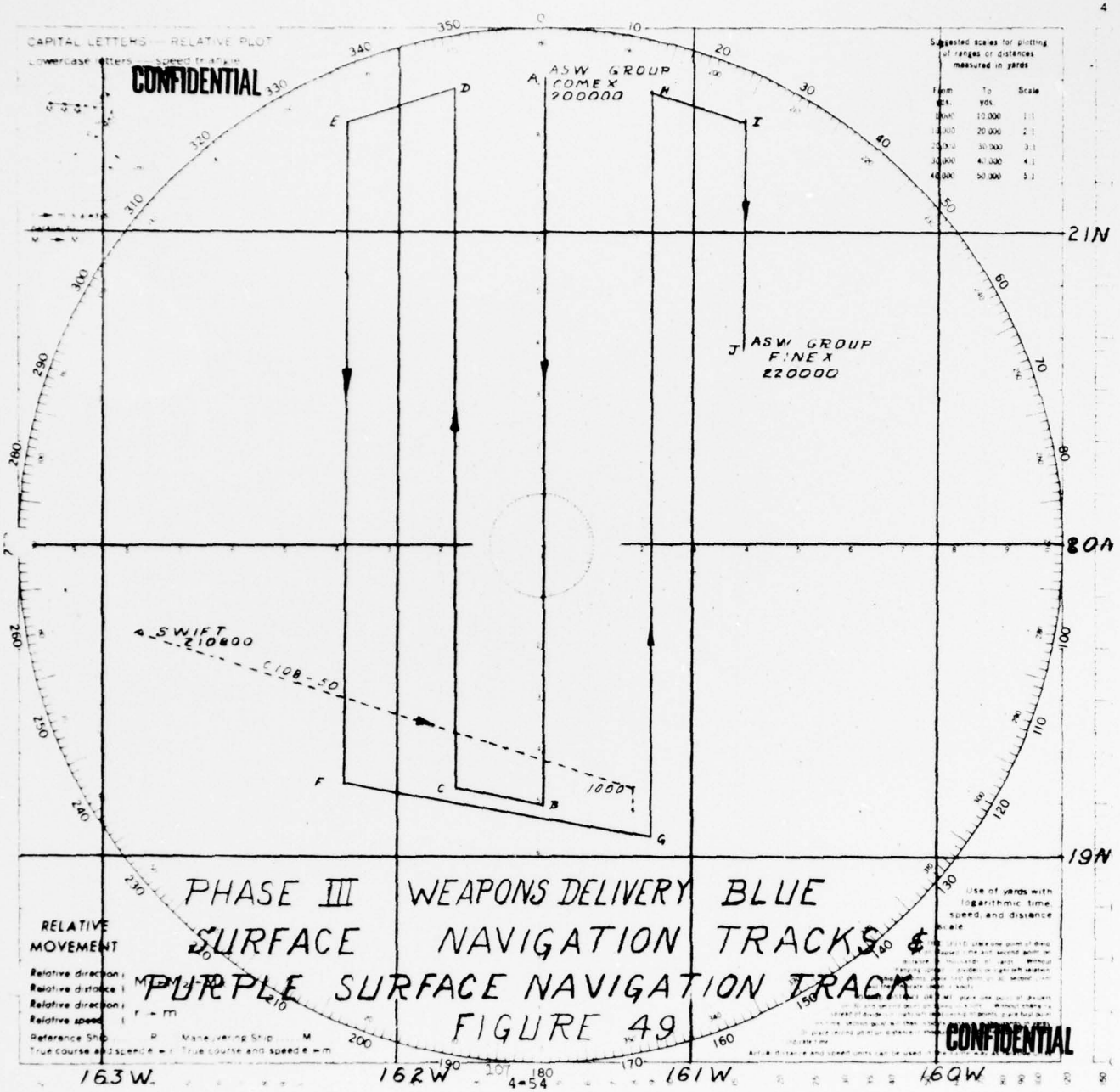
CVS/DE - OP SHIP WASP FORM CENTER

FOR FURTHER INFO SEE TABLES AND FIGURES

TABLE 59

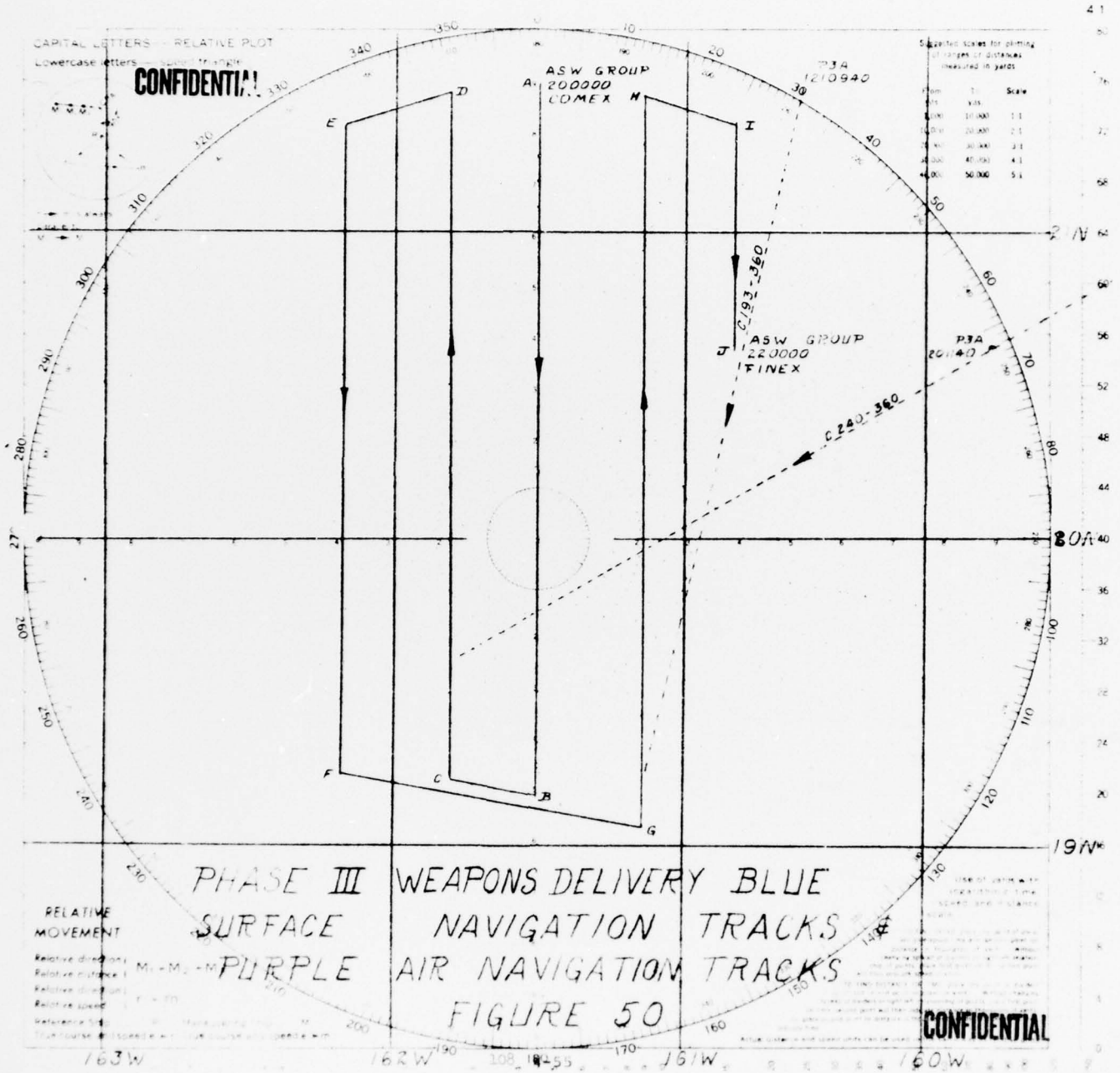
	INPUT							RESPONSE											
TIME	TARGET SHIP	TGT BRNG RNGE FM DLRP	TARGET COURSE SPEED	TARGET DEPTH/ ALTITUDE	WIND DIRECTION VELOCITY	UNIT (OWN SHIP)	UNIT SENSOR	OS BRNG RNGE FM DLRP	O.S. COURSE SPEED	TGT BRNG RNGE FM SENSOR	TARGET COURSE SPEED	TIME O.S. C/C	TYPE WPN C/S	TIME WPN ASSND	TIME WPN ENGAGED	TIME WPN FIRED	TIME TO REACH TARGET	WPN COURSE SPEED	WPN ENTRY POINT
210930	SWIFT	188-40	108-50	SURF	090-10	KOELSCH	SPS-10	161-58	000-14										
1000	SWIFT	160-50	180-50	SURF	090-12	KOELSCH	SPS-10												
1012	SWIFT	DROP																	
210940	AJ	089-105	193-360	20,000A	090-12	JOHNSON	SPS-48	157-58	000-14										
1005	DROP																		
211000	CORK	155-61	000-14	200-D	090-12	VOGE	SQS-26	156-56	000-14										
1100	DROP																		
211000	STOPPER	158-47	160-6	400-D	090-12	KOELSCH	SQS-26	158-52	000-14										
1100	DROP																		





PHASE III WEAPONS DELIVERY BLUE SURFACE NAVIGATION TRACKS & PURPLE SURFACE NAVIGATION TRACK

FIGURE 49



SECTION V

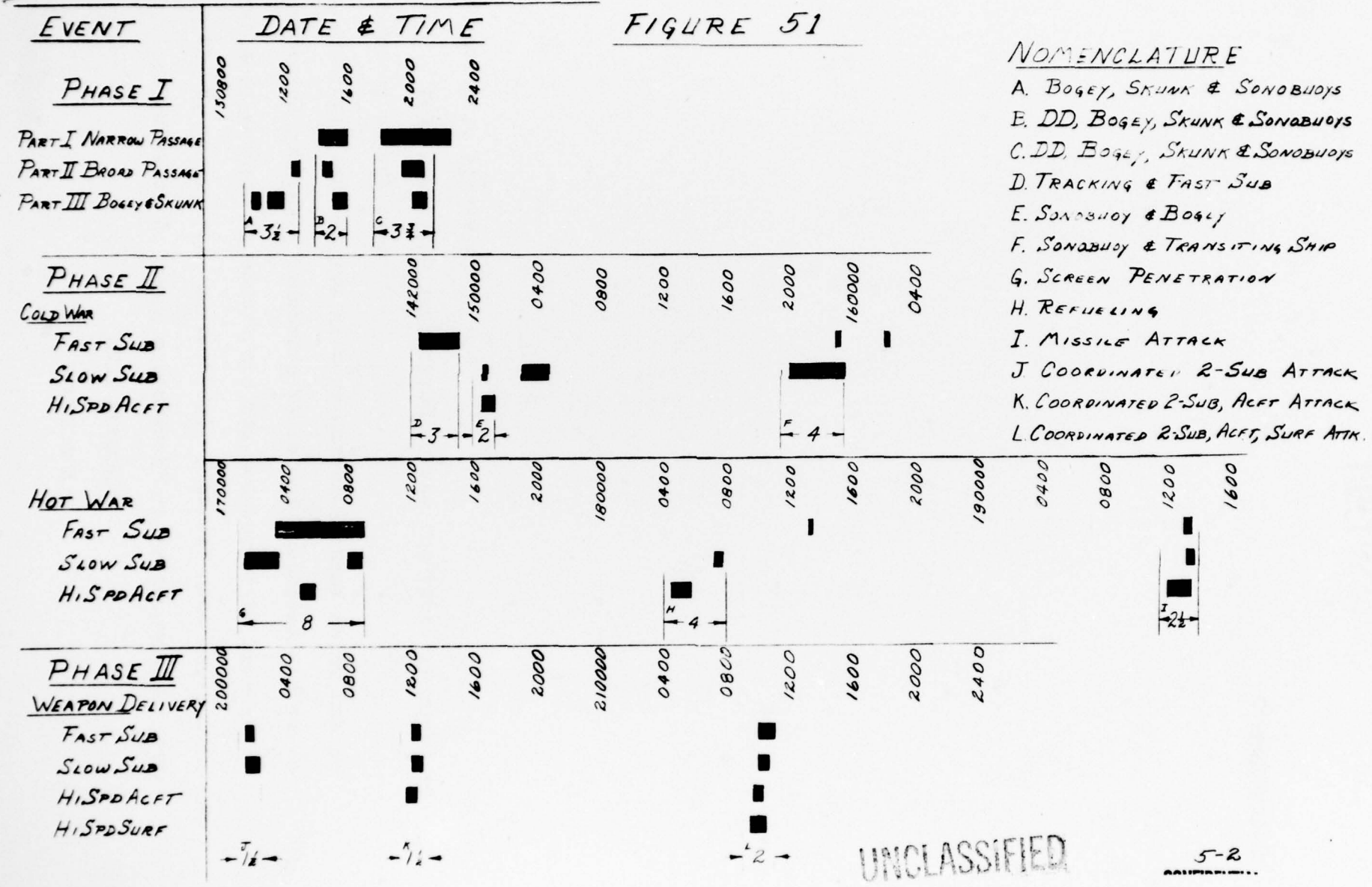
TEST SCHEDULE

In interest of ASDEC efficiency, it is recommended that periods of inactivity be skipped. Further, more realism in the test will results if events are run sequentially. However, conducting the tests sequentially is not mandatory. This is particularly true of the Weapons Delivery tests which may be conducted at any time.

A test scheduled indicating active and inactive times is indicated in Figure 51.

ENGAGEMENT SCHEDULE

FIGURE 51



NOMENCLATURE

A. BOGEY, SKUNK & SONOBUOYS
B. DD, BOGEY, SKUNK & SONOBUOYS
C. DD, BOGEY, SKUNK & SONOBUOYS
D. TRACKING & FAST SUB
E. SONOBUOY & BOGEY
F. SONOBUOY & TRANSITING SHIP
G. SCREEN PENETRATION
H. REFUELING
I. MISSILE ATTACK
J. COORDINATED 2-SUB ATTACK
K. COORDINATED 2-SUB, ACFT ATTACK
L. COORDINATED 2-SUB, ACFT, SURF ATTK.

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